

February 8, 2019

Ms. Yvonne Smith EPA On-Scene Coordinator U.S. Environmental Protection Agency, Region 7 11201 Renner Boulevard Lenexa, Kansas 66219

Subject: Removal Assessment Final Trip Report

KCS&R on Guinotte Site, Kansas City, Jackson County, Missouri

U.S. EPA Region 7 START 4, Contract No. EP-S7-13-06, Task Order No. 0179

Task Monitor: Yvonne Smith, On-Scene Coordinator

Dear Ms. Smith:

Tetra Tech, Inc. is submitting the attached Removal Assessment Final Trip Report regarding the Kansas City Smelting and Refining on Guinotte site in Kansas City, Jackson County, Missouri. If you have any questions or comments, please contact the Project Manager at (816) 412-1760.

Sincerely,

Lauren Holt

START Project Manager

Ted Faile, PG, CHMM START Program Manager

Enclosure

cc: Debra Dorsey, START Project Officer (cover letter only)

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REMOVAL ASSESSMENT FINAL TRIP REPORT

KCS&R ON GUINOTTE SITE KANSAS CITY, JACKSON COUNTY, MISSOURI

EPA ID: MON000706446

Superfund Technical Assessment and Response Team (START) 4 Contract No. EP-S7-13-06, Task Order No. 0179

Prepared For:

U.S. Environmental Protection Agency Region 7 11201 Renner Boulevard Lenexa, Kansas 66219

February 8, 2019

Prepared By:

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1.0 INTRODUCTION

Tetra Tech, Inc. (Tetra Tech) was tasked by the U.S. Environmental Protection Agency (EPA) Region 7 Superfund Division, under Superfund Technical Assessment and Response Team (START) 4 Contract Number EP-S7-13-06, Task Order Number 0179, to conduct a Removal Assessment at the Kansas City Smelting and Refining (KCS&R) on Guinotte site (the site) in Kansas City, Missouri. The primary objective of the project was to evaluate whether there are any threats to human health or the environment from past smelting activities at the site, and to determine if any removal action (RA) is warranted. START activities during the project included, but were not limited to:

- Collecting and field screening surface soil samples at residential properties to evaluate whether conditions warranted removal action.
- Collecting and field screening surface soil samples at the former KCS&R facility to evaluate whether conditions warranted removal action.
- Completing Property Screening Forms for the properties sampled and screened for lead.
- Submitting soil samples for laboratory confirmation analysis for lead.
- Documenting RA activities.

The START Project Manager for this RA was Lauren Holt who was joined by Tommy Rebecchi for field activities. EPA On-scene Coordinator (OSC) for the project was Yvonne Smith.

2.0 SITE DESCRIPTION

The following sections describe the site's location, recount its operational history, and summarize previous investigations.

2.1 SITE LOCATION AND OPERATIONAL HISTORY

The former KCS&R facility is in the northeast industrial sector of Kansas City, Missouri at 2223 Guinotte Avenue, Kansas City, Missouri (Figure 1). The site is in Section 23, Township 10 North, Range 6 East, and is shown on the Kansas City, Missouri and North Kansas City, Missouri U.S. Geological Survey (USGS) 7.5-minute topographic series maps (USGS 1996, 1997).

The Kansas City Smelting and Refining Company began operations in 1880 in Argentine, Kansas. Operations focused on refining ores: zinc, pig lead, and gold and silver bullions from Mexico and Colorado. By the 1890s, the company had smelting and refining works in Kansas City, Missouri (see Figure 1); Leadville, Colorado; and El Paso, Texas. In 1899, the Consolidated Kansas City Smelting and Refining Company, along with some other smaller companies (including Omaha and Grant Smelting, Philadelphia Smelting and Refining, and National United Colorado), merged to form the American Smelting and Refining Company. Smelting and refining operations ceased at the Guinotte Avenue site around 1920 following construction of new smelters closer to the mines in Colorado and when it became cheaper to ship Mexican ore by water to east coast smelters (Tetra Tech 2015).

The site is owned by and is occupied by two structures. The main building (former KCS&R facility) at 2223 Guinotte is approximately 9,000 square feet (ft²) and is constructed of brick with a built-up roof. In early 2018, the building was renovated into a lodging facility with twenty-one 300 ft² units. The structure south of the former facility, on the rear portion of the property (410 N Park Avenue), houses offices for ________ concrete roofing tile manufacturing business. The building is approximately 11,000 ft² and constructed with cinderblock with a corrugated metal roof.

2.1.1 Geology

Soils in the area of investigation are moderately sloping and mostly covered (85 percent) by asphalt, concrete, buildings, or other impervious material. Soil is classified as Urban Land-Bottom Land Complex, that varies in composition because it has been extensively reshaped by cutting and filling. Areas associated with this soil complex are subject to localized flooding for short periods. The Urban Land-Bottom Land soils of Jackson County extend to 10 or more feet below ground surface (ft bgs) (USDA 1984).

The northern extents of Jackson County are in the Dissected Till Plains section of the Central Lowland physiographic province (Miller and Vandike 1997). Surficial soils along the Missouri River valley are underlaid by quaternary alluvial deposits of clay, sand, and gravel up to 150 feet thick. Alternating Pennsylvanian limestone and shale strata, indicative of marine transgression-regression sequences, lie beneath the alluvial deposits and gently dip to the northwest (Hasan, Moberly, and Caoile 1988). The uppermost layers of Pennsylvanian bedrock just south of the Missouri River and near the site belong to the Lower Bronson Subgroup of the Kansas City Group, and consist of the Bethany Falls, Hushpuckney Shale, and Middle Creek Limestone members (U.S. Geological Survey 2004).

2.1.2 Hydrogeology

The site is in the lowland areas of Kansas City approximately 0.35 mile south of the Missouri River and is underlain by unconsolidated alluvial deposits of clay, silt, sand, and gravel belonging to the Late Pleistocene and Holocene Quaternary System. Thicknesses of Missouri River alluvium range from 100 to 150 feet in its reaches in the Kansas City area (Kelly 1996). Depth to groundwater varies as it is influenced by river stage and recharge from the surrounding uplands but is typically expected between 15 and 30 feet below ground surface (bgs). The Missouri River valley aquifers provide a high capacity source of high-quality groundwater (Hasan, Moberly, and Caoile 1988). Kansas City Public Water Services provides municipal water services to the community from surface intakes along the Missouri River or from collector wells, under the influence of surface water, that are completed in the Missouri River alluvium. No municipal or registered domestic wells are within 1 mile of the site.

2.1.3 Hydrology

The site is in the Lower Missouri-Crooked watershed (EPA 2018). Based on a review of topographic maps, runoff from the site would follow the general topographic gradient northward toward the Missouri River, flowing west to east from its confluence with the Kansas River 2.5 miles to the west. Most runoff would likely be captured by stormwater inlets near the site.

2.2 PREVIOUS INVESTIGATIONS

In 2015, a Preliminary Assessment (PA) was completed by START for the site. At the time of PA screening activities, the main building was used as a cross-fit training facility. The rear building was used as offices for the property owner's roofing tile company. During the PA, Tetra Tech START screened surface soils and interior dust at the site for lead contamination. The site was divided into 11 areas: three cells, two drip zones, two gravel areas, two piles, and two road easements. A soil sample consisting of

seven to nine aliquots was collected in each area. Each sample was dried, passed through a number 10 (2 millimeter) sieve, and homogenized before undergoing x-ray fluorescence (XRF) screening for lead. All soil samples were submitted to the EPA Region 7 laboratory for analyses for arsenic, cadmium, chromium, lead, and zinc.

Field screening data showed seven of the 11 areas contained average XRF-lead concentrations exceeding the EPA action level for industrial soil of 800 milligrams per kilogram (mg/kg) or parts per million (ppm). Laboratory analytical results had detections of lead concentrations in nine soil samples ranging from 34.5 to 8,850 mg/kg. The EPA regional screening level (RSL) for lead in industrial soil (800 mg/kg) was exceeded in six of the nine laboratory samples. Analytical results showed that seven of the 11 soil samples contained arsenic at concentrations from 7.6 mg/kg to 38.1 mg/kg. The EPA RSL for arsenic in industrial soil is 3 mg/kg. Cadmium was detected in six soil samples at concentrations from 1.1 to 6.3 mg/kg, all well below the EPA RSL of 980 mg/kg. Chromium was detected in six samples, at levels from 2.3 to 18.7 mg/kg. No RSL has been established for total chromium. Zinc was detected in all samples at concentrations from 5.1 to 1,420 mg/kg, all well below the EPA RSL of 350,000 mg/kg.

START collected wipe samples of flooring at three locations inside the main building (the former cross-fit training facility). These locations represented common areas and areas where children tended to stay while their parents worked out. Wipe sample #1 was collected in the northeast portion of the building. Wipe sample #2 was collected in the workout area at the northwest corner of the building. Wipe sample #3 was collected in the southwest portion of the building inside the entryway from the loading dock along the south side of the building. The concentration of lead in each wipe sample was reported in micrograms per square foot (μ g/ft²) to represent concentration of lead per unit area (lead loading) at each sampling location. Analytical results from these samples were: Wipe sample #1 – 81.94 μ g/ft², Wipe sample #2 – 14.03 μ g/ft², and Wipe sample #3 – 150.50 μ g/ft². The EPA action level for lead dust in flooring is 40 μ g/ft².

3.0 REMOVAL ASSESSMENT ACTIVITIES

During the RA, between July 21, 2017, and December 18, 2018, START collected surface soil samples at 41 residential properties in the neighborhood northeast of the site and at the former KCS&R site to evaluate metals contamination in surface soil from former smelting activities (Figure 2, Appendix A). The RA included: (1) generating a scale drawing of each property, (2) dividing each property into distinct cells, (3) collecting a multi-aliquot surface soil sample in each cell, (4) screening the soil samples for lead by use of a NitonTM XRF spectrometer, and (5) submitting selected soil samples for laboratory analysis. A description of assessment activities follows.

3.1 SURFACE SOIL SAMPLING FOR XRF SCREENING

Surface soil screening proceeded in accordance with guidelines established in the *Superfund Lead-Contaminated Residential Sites Handbook* (EPA 2003). The Tetra Tech START field crew, after receiving signed access agreements from each property owner, generated a Property Screening Form and identified cells that would be sampled at each property. While the maximum size of a cell was 100 by 100 feet, actual sizes of cells were determined in the field based on site features. Each cell extended from the drip zone around the structure 100 feet in all directions or to the property line, whichever distance was shorter. Additional areas or cells that were screened included drip zones, vegetable gardens, and children's play areas that were at least 25 by 25 feet. A composite sample consisting of nine aliquots was collected from each cell. Each sample was collected 0 to 2 inches bgs by use of a trowel, and placed in a labeled, sealed plastic bag.

All samples were transported to the START Field Office (FO), along with the Property Screening Forms. At the FO, each sample was transferred to a clean pan and allowed to completely air dry. Once dried, the samples were homogenized, passed through a number 10 (2-millimeter) sieve, and then screened for lead by use of an XRF analyzer. Three separate XRF readings were taken from each sample and the average of these three readings was calculated and recorded on the property screening form (Appendix B). Each screening form was then put into a geo-referenced property map (Appendix C).

3.2 SURFACE SOIL SAMPLING FOR XRF CONFIRMATION AND RCRA METALS

In accordance with the Quality Assurance Project Plan (QAPP), approximately 10 percent of the screened samples were submitted to the EPA Region 7 laboratory for analysis of Resource Conservation and Recovery Act (RCRA) metals arsenic, barium, cadmium, chromium, lead, selenium, and silver and to

confirm XRF readings. Samples selected for submittal to the laboratory were collected 0 to 2 inches bgs by use of a trowel, and placed in a labeled, sealed plastic bag.

3.3 SURFACE SOIL SAMPLING FOR BIOAVAILABILTY STUDY

Five split samples from the July 2017 sampling were submitted to the University of Colorado in Boulder, Colorado, (UC), under subcontract to Tetra Tech, to determine the bioavailability of lead in the samples. These analyses were done to determine the percentage of lead in site soils that would theoretically become bioavailable over time.

3.4 SURFACE SOIL SAMPLING FOR DISPOSAL DETERMINATION

To determine proper disposal of potentially excavated material, soil samples (multi-aliquot composites) were collected at the former KCS&R facility where, based on previous screening activities, there were known to be elevated concentrations of lead. These samples were submitted to the EPA Region 7 laboratory for toxicity characteristic leaching procedure (TCLP) analyses of lead.

4.0 ANALYTICAL DATA SUMMARY

This section summarizes analytical data from surface soil samples collected during the RA at the KCS&R on Guinotte site. Samples were submitted to the EPA Region 7 laboratory in Kansas City, Kansas for laboratory confirmation of XRF screening results, RCRA total metals, and TCLP analyses for lead. In vitro bioassay analyses were done by the UC Boulder laboratory.

4.1 SOIL SAMPLES FOR XRF SCREENING

Between July 2017 and September 2018 START did RA activities at 41 residential properties. Field screening of samples identified one residential property with at least one cell (excluding the drip zone) containing lead at a concentration exceeding 800 mg/kg and 19 residential properties with at least one cell (excluding the drip zone) with a lead concentration more than 400 mg/kg but less than 800 mg/kg. A summary of the surface soil screening results for assessed residential properties is in Appendix D.

In December 2018, START team members conducted RA activities at the former KCS&R site at 2223 Guinotte Avenue and 410 N Park Avenue. Surface soil samples were collected from nine distinct cells and screened via XRF. Results indicated that five surface soil samples (excluding the drip zones) at the site contained lead at concentrations in exceedance of the EPA action level for industrial soil of 800 mg/kg (see Appendix E).

4.2 SURFACE SOIL SAMPLES FOR XRF CONFIRMATION AND RCRA METALS

Determination of acceptable XRF screening data followed guidelines in Section 9.7 of EPA Method 6200—Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment (EPA 2007). Splits of approximately 10 percent (17) of residential surface soil samples and all (9) surface soil samples collected from the former KCS&R site were submitted to the EPA Region 7 laboratory in Kansas City, Kansas, for confirmation analysis for lead. XRF data are generally considered valid if a comparison between the XRF values and corresponding laboratory results yields a regression coefficient (r²) of at least 0.7. The r² value for data acquired during this project was 0.972. So, the remaining XRF readings are considered valid screening level data. Correlation data for the 26 soil samples analyzed by both XRF and the EPA Region 7 laboratory are in Table 1, Appendix E.

Analytical results for RCRA metals showed arsenic in exceedance of the RSL for residential soil of 0.68 mg/kg in all 17 residential surface soil samples submitted for laboratory analysis. All surface soil samples collected at the former KCS&R property contained concentrations of arsenic above the RSL for

industrial soil of 3.0 mg/kg. Cadmium concentrations above the residential soil RSL of 7.1 mg/kg were detected in eight residential samples. A summary of analytical data for RCRA metals is in Table 2 (Appendix E).

4.3 SURFACE SOIL SAMPLES FOR BIOAVAILABILTY STUDY

Five residential surface soil samples were submitted to the UC laboratory in Boulder for comparative analysis of bioavailability of lead. These analyses were done to determine the percentage of lead in site soils that would theoretically become bioavailable over time. Table 3 in Appendix E summarizes the results of the laboratory analyses, along with XRF readings for lead in surface soils where those samples were collected. UC laboratory results ranged from 63 to 70 percent indicating that a significant portion of lead in the soil would be bioavailable.

4.4 SURFACE SOIL SAMPLES FOR DISPOSAL DETERMINATION

TCLP analyses did not identify lead above the regulatory limit of 5 milligrams per liter (mg/L) in any sample (excluding drip zones). So, none of the contaminated soil would meet the criterion for classification as hazardous waste by the characteristic of toxicity. Chain-of-custody records for the laboratory samples are in Appendix F and results for TCLP analyses of lead are in Appendix G with other EPA laboratory data.

5.0 SUMMARY

At the KCS&R on Guinotte site in Kansas City, Missouri, an RA was done to assess residential properties for lead contamination in soils associated with former smelting operations. Between July 31, 2017, and December 18, 2018, sampling was done at the former KCS&R site and 41 residential properties. Written access agreements were obtained for the properties to be sampled. The properties were then sketched and divided into cells prior to collection of surface soil samples. The samples were processed and screened for lead using an XRF analyzer. Splits of about 10 percent of the residential samples and all site samples were submitted for laboratory confirmation analysis. Screening results were recorded on Property Screening Forms.

During the RA, 19 residential properties were identified with at least one cell containing surface soil with a lead concentration greater than 400 mg/kg but less than 800 mg/kg, and 1 residential property with at least one cell containing lead at a concentration exceeding 800 mg/kg. Five samples collected from the site contained lead at concentrations in exceedance of the EPA action level of 800 mg/kg for lead in industrial soils.

The RCRA metal arsenic was detected above the residential soil RSL of 0.68 mg/kg in all 17 residential surface soil samples, and above the industrial soil RSL of 3.0 mg/kg in all samples collected from the former KCS&R Property. Cadmium concentrations above the residential soil RSL of 7.1 mg/kg were identified in eight of the residential surface soil samples submitted for analysis.

To determine the percentage of lead in site soils that would theoretically become bioavailable over time, five surface soil samples were submitted to the UC laboratory in Boulder, Colorado for comparative analysis of bioavailability of lead. Laboratory results ranged from 63 to 70 percent indicating that a significant portion of lead in the soil would be bioavailable.

No surface soil samples (excluding drip zones) collected from the former KCS&R property analyzed for TCLP exceeded the regulatory limit for lead of 5 mg/L.

5.1 REMOVAL CONSIDERATIONS

One residential property was identified with a cell containing lead at a concentration greater than 800 mg/kg, and 19 properties were identified with at least one cell containing lead at a concentration exceeding the EPA action level of 400 mg/kg for lead in residential soil. Concentrations of lead in surface soil at five of the nine surface soil samples collected at the former KCS&R site exceeded the EPA action level of 800 mg/kg for lead in industrial soil. Concentrations of lead in TCLP analyses were not

identified in any samples (excluding drip zones) above the regulatory limit of 5 mg/L. START anticipates that these properties may be addressed by the EPA Remedial Program.

5.2 PRE-REMEDIAL CONSIDERATIONS

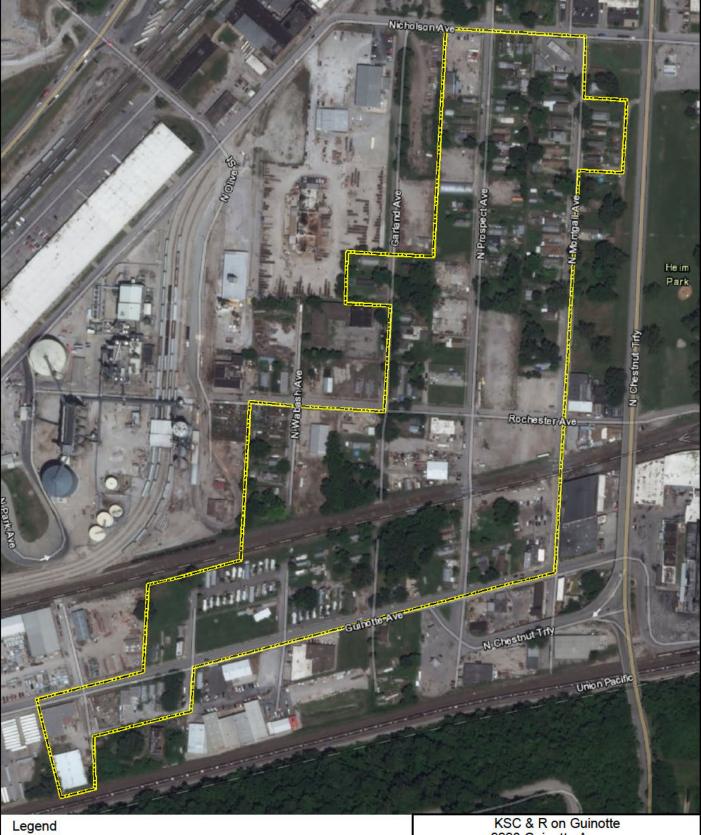
A PA was completed for the site under the START 4 contract in 2015 under Task Order 0104.002. Field data accumulated during this RA will help determine whether further pre-remedial investigation is warranted.

6.0 REFERENCES

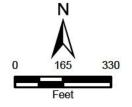
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APPENDIX A FIGURES





Approximate area of investigation



KSC & R on Guinotte 2223 Guinotte Avenue Kansas City, Missouri

Figure 2 Approximate Area of Investigation



Source: ArcGIS Online, World Imagery, 2017

APPENDIX B PROPERTY SCREENING FORMS

	#: KCSR	42 Da	, ,	e of Screening: 8/1/17 rator: CAE
ell 1:	209 Cell 5:	DW 2:	Gravel Area 1:	Pile:
ell 2:	493 Cell 6:	DZ:	Gravel Area 2:	Alley Easement:
				Road Easement:
ell 4:	25 DW 1: 383	Garden 2:	Play Area:	
	Cell 7		Cell 3	
	262 724		223 - 24	
	275 = 24		346 = 27	
	Ang. 251+24		Arg. 286 = 26	
	VXVVX			Consider
				Till
	Cell /	40	150	DVIV-
1	197 + 21	110		ortd.
	224 = 22			
	Avg. 209 121	Co	north Sidewalk	15±3
			Ce11 2	342+2
			446±31 501±33 533° 33	371 2 Avg.
			501±33 533±33	383=
1			Ang. 493 + 32	
	Guinot	te Au		

EPA Site #: KCSR- DD2 Date of Access: 73/17 Date of	f Screening: 8/1/17
Screening Results: XRF I.D.: 1542 Date: 8/15/17 Operation	or: CAE
Average XRF Pb Screening Results (ppm)	
Cell 1: Cell 5: DW 2: Gravel Area 1:	Pile:
Cell 2: <u>338</u> Cell 6: DZ: Gravel Area 2:	
Cell 3: Cell 7: Garden 1: Landscaping:	Road Easement:
Cell 4: DW 1: Garden 2: Play Area:	
254±24	
317 = 27	1
294 = 25	
289=25	
4 2/3	4
342 ± 27 3107 ± 28	
350-27 House	X
7, 3/02 ± 27	
Cell 2	Cell
338±27	293 25
322 ± 26	370 ± 28 y 340 ± 27
338 ± 27	340 127 334 = 27
	337727
Guinotte HVL	

EPA Site #: KCS Screening Results: X Average XRF Pb Screening	RF I.D.: 15	142 Da	te: 8/15/17	Date of Sc Operator:	reening: 8/1	/17
Cell 1: 166			Gravel Area 1	I	Pile:	
Cell 2:						
Cell 3: 293	Cell 7:	Garden 1:	Landscaping:	I	Road Easement: _	
Cell 4: I						
	Ce// 3	2104		L		
		3/8 = 2 $277 = 2$ $284 = 2$ $293 = 2$	5 9			
TA A B A B A B A B A B A B A B A B A B A		10	Call 2 20±19 58±19 47±18 55±19		DW1	N
Barla	Call 1	159±19 195±20 145±18 164±19				
	a	rinotte	Avi			

Screening Results		542 D	ess: 1/3//7 Date: 8/15/17	Date of Screening Operator:	/ /
Cell 1: 358		DW 2:	Gravel Area 1		
				2: Alley Eas	
				Road Eas	sement:
Cell 4:	DW 1:	Garden 2:	Play Area:		
	Call 3 481±	32		Garay	
	455 ± 452 ± 462 ±	- 32 - 32 + 32			
W HW	HOL	Porch 1	Cell 2 404 ± 36 601 ± 36 593 ± 36 600 ± 36		
	Cocas	3	Ce111 345 ± 28 342 ± 28 348 ± 27 58 ± 28		
	Ge	arland 1	Ava		

EPA Site #: KCSR- 005 Screening Results: XRF I.D.: 15	Date of Access:	7/31/17	Date of Screening: 8 Operator: A	11/17
Average XRF Pb Screening Results (p)		0/10/10	Operator.	-
Cell 1: 294 Cell 5:	DW 2:			
Cell 2: 346 Cell 6:	DZ:	_ Gravel Area 2: _	Alley Easement	:
Cell 3: 426 Cell 7:	Garden 1:	_ Landscaping: _	Road Easement	:
Cell 4: 546 DW 1:	Garden 2:	_ Play Area:		
			- XX	
Ce 11	553-3	5		
	5/7 34			
	568-35 546±34			
/ Ce 1/3		· /		
75/-34				
4017 30				
1 426± 3/	, ,	110,100		
		HIUUX		
Sidewalk				
Gell 2				
322 = 26				
351-27				
322 ± 24 351 ± 27 344 ± 28 346 ± 27				
Cell L		Porch		
		10.0		
303 [±] 25 283 [±] 25 297 [±] 25	300			
297-25	2)88		<u> </u>	
294 ± 25				
		X		

N

EPA Site #: KCSR- DO Lo Date of Accessore Screening Results: XRF I.D.: 1542 D Average XRF Pb Screening Results (ppm)	ess: 7/31/17 Date of Screening: 8/1/17 Date: 8/15/17 Operator: AE
Cell 1: Cell 5: DW 2:	Gravel Area 1: Pile:
	Gravel Area 2: Alley Easement:
Cell 3: 247 Cell 7: Garden 1:	Landscaping: Road Easement:
Cell 4: <u>225</u> DW 1: Garden 2:	Play Area:
Cell	Cell 2
188720	246 = 23
174719	220 = 21
170 + 19	234/= 22
Cell 47	Cerl 3
224-22 231e = 22	257 [±] 23 277 [±] 24
234 ± 22 214 ± 22 225 ± 22	277± 24 268± 24 267± 24
223-22	267-29
	Garage
V (SD-08)	

Carla

EPA Site #: KCSR Screening Results: XF Average XRF Pb Screen	RF I.D.: 154	Date:		of Screening: 8/1/17 tor: CAE
Cell 1: 358 Ce	Cell 5:	DW 2:	Gravel Area 1:	Pile:
Cell 2: 394 C	ell 6:	DZ:	Gravel Area 2:	Alley Easement:
a di la sala da Marana da				Road Easement:
Cell 4: D'	W 1:	Garden 2:	Play Area:	
	XCSE-	SDL .		
YCSR OD		Concrete	(1) 2 3(1) 27 44/2 31 379 28 3942 29 (1) (333 29 373 29 367 28 358 28	
		G	uinotte Au	

EPA Site																	Screen			8/1	117
Average													-								
Cell 1: _	5	48	Cel	ll 5:	-		_ D	W 2	: _			Grav	el Are	a 1:_			_Pile:	:			
Cell 2:	3	70	Cel	ll 6:	-		_ D	Z:				Grav	el Are	a 2: _			Alle	y Eas	semen	nt:	
Cell 3: _			Cel	11 7:			G	arde	n 1:	2		Land	scapii	ng: _			Roa	d Eas	semen	ıt:	
Cell 4: _			_ DW	V 1:			G	arde	n 2:			Play	Area:								
											1				i						
														1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
					(((((((((((((((((((((((((((((((((((((((
													-								
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Cala

EPA Site #: KCSR- DD 9 Screening Results: XRF I.D.: Average XRF Pb Screening Results	542 Date:	1 1 1 1 1	Date of Screening: 8	12/17
Cell 1: 504 Cell 5:	DW 2:	Gravel Area 1:	Pile:	
Cell 2: 354 Cell 6:				
Cell 3: 124 Cell 7:				
Cell 4: 286 DW 1:				
	Alley			
(CLII 4)		Barage	7	
Shed	Concrite		X	
272 = 24	Ce114		544434	X I I I I I I I I I I I I I I I I I I I
282=25		House	469+32	
284 = 25			1499-32 504+3	
			Concrete	
Ce11 3		Cg //		
115±16			_	X
129± 17 128±17		343	t 27	3
124 = 17		369± 355=	28	K B
12111		354-	t 27	131
				*
<i>y</i>				
	and the second s			
		Δ		
	(Suinst	le HVI		

Carla

EPA Site #	#: KCSR- D/D Date of Access: Results: XRF I.D.: 1542 Date	
	RF Pb Screening Results (ppm)	
Cell 1:	344 Cell 5: DW 2:	Gravel Area 1: Pile:
		Gravel Area 2: Alley Easement:
Cell 3:	120 Cell 7: Garden 1:	Landscaping: Road Easement:
	103 DW 1: Garden 2:	
	Alle	
	DC 1/2	1 P. 11 2 X X 1 1 1
	419 = 30	108 20
	739 = 40	437 = 31
	Y 420±31	416=31
	526-34	420 = 31
		KCSR-C
2		
3		
	Cell	Cell 4
3	338±26 360±28 332±26 344±27	84 = 14
	340 - 28 332 ± 26	132 = 17
	344±27	1032/6
	Guinotte	Av



Cell 1:	164 Cell 6:	Graden 1: Lar	avel Area 2:	Alley Easement:
Cell 4:		Garden 2: Pla	vcicks	
	CIII AS	2 - Couch	144 ² 20	
		Alley	Cell	382±29 450±31 383±29



Cell 1: 4		DW 2:	Gravel Area 1:	
Cell 3:	Cell 7:	Garden 1:		Alley Easement: Road Easement:
Wabash My	Shad	on crete	Call 1 447 ± 31 451 ± 32 419 ± 30 439 ± 31	nonce
		Alley		

Carlo

Cell 1:	90 Cell 5:	DW 2: Gravel Area 1:	Pile:
Cell 2:	Cell 6:	DZ: Gravel Area 2:	Alley Easement:
		Garden 1: Landscaping:	Road Easement:
Cell 4:	DW 1:	Garden 2: Play Area:	
		Guinotte Ave	
		Asphalt Drive	
			/ \
		Mobile Homes	PU
	Par	ad Mora	100
		Concrete Pads	
		Dr W	
	· Sampled	grassy ares throng	uouf.
		- 1 - Cell 1	
		187±20	
		175 [±] 20 208 [±] 21	
		190±20	
		Alley	

EPA Site #: KO	CSR- 014 Date of Ac XRF I.D.: 1542	cess: 7/31/17 Date: 8/19/17	Date of Screening: 8	2/17
The second secon	Screening Results (ppm)			
	_ Cell 5: DW 2:			
	_ Cell 6: DZ:			
	_ Cell 7: Garden 1:			
Cell 4:	_ DW 1: Garden 2:	Play Area: _		
	Alley			
	(Cell 2)		Cell 2 252 [±] 23 276 [±] 24 282 [±] 24 270 [±] 24	
VCSR-013	Call 1 207 + 21 215 + 22 224 + 22 216 + 22	House	(a11)x	Barland
	Bui	notte Ave		

Nicholson Park Background-

KCS and R on Guinotte, Residential Screening Form

		Date of Access:		Date of Screening:	- /
		1542 Date:	8/15/17	Operator:	
	b Screening Result		=======================================		
Cell 1:	Cell 5:	DW 2:	Gravel Area 1:_	Pile:	
Cell 2:	Cell 6:	DZ:	Gravel Area 2: _	Alley Easeme	ent:
Cell 3:	Cell 7:	Garden 1:	Landscaping: _	Road Easeme	ent:
Cell 4:	DW 1:	Garden 2:	Play Area:		
		Cell /			
		31=10			
		33±10			
		30 - 10			
		31=10			
		31-14			
				The state of the s	
	•				
				49	
				h w was	
				Na C	
				97	
	HIN	licholson t	Ave		

N

Berkley tark Background

Screening Res	KCSR-	542 Date	8/1/17	Date of Screening: 8/2/17 Operator:
	73 Cell 5:		Gravel Area 1:	Pile:
				Alley Easement:
				Road Easement:
Cell 4:	DW 1:	Garden 2:	Play Area:	
Ser Je			80 ³ 20 91 ³ 20 77 ² 20 783 ³ 20	
		Fina	<i>t</i> st.	

EPA Site #: KCSR- Ol Date of Access: 9-6-2019 Date of Scree	ning:
Screening Results: XRF I.D.: 1542 Date: 9/24/18 Operator: 1	H
Average XRF Pb Screening Results (ppm)	
Cell 1: 230, 75 Cell 5: DW 2: Gravel Area 1: Pile	:
• Cell 2: <u>275. 11</u> Cell 6:• DZ: <u>367.78</u> Gravel Area 2: Alle	ey Easement:
• Cell 3: <u>553.65</u> Cell 7: Garden 1: Landscaping: Roa	ad Easement:
Cell 4: 214. 32 • DW 1: 129.8 Garden 2: Play Area:	
N. Prospect Avenue	
RAIL ROPO TRACKS	
GELUZ CELUI	
A A S S S S S S S S S S S S S S S S S S	
SHED PATIO	\ \frac{\text{w}}{2}
Parch 1	()
SIDEWALK	5
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4
SHED SIDEWALK GENY	X I
	2
	<u> </u>
PWI	
GARAGE	

EPA Site #: KCSR- 018 Date of Access:	Date of Screening:
Screening Results: XRF I.D.: 1542 Date:	9/24/18 Operator: LH
Average XRF Pb Screening Results (ppm) Cell 1: 223.28 Cell 5: DW 2:	Gravel Area 1: Pile:
• Cell 2: 237.74 Cell 6:•DZ: 564.2	
Cell 3: 269.87 Cell 7: Garden 1:	
Cell 4: OW 1: 270. 89 Garden 2:	
N. Garland Avenue	
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
DZ.	DZ
SHED C-3	touse C- Z
	day.
	Porch 3
	SIDEWALK DW Z
GREAGE C-2	
	= 5F-T

EPA Site #: KCSR- 019		The state of the s		
Screening Results: XRF I.D.: 50		24/18	Operator: LH	
Average XRF Pb Screening Results (p			D:1	
Cell 1: 3(10.27 Cell 5:				
• Cell 2: 375.8 Cell 6:				
• Cell 3: 256.7 Cell 7:				nent:
Cell 4: DW 1:	_ Garden 2: Play	Area: _		
Guinotte Avenue				
				_
	***		1	
	C-3	C-1		LN L
Coop				
(m)	DRIVEWAY	*		
Coo	(CONCRETE)			
1000				
		Tim	ME-	
		4	Avenu	
	Singer Al	40-1	2	
Ty House			PROSPE	
Sipewalk				
M	Deck		Z	
		-[
	C DNCR	2.TE		
	PAD PAD		V	
	1017			
	SIDEWALK			
				= 5FT

	g Results	: XRF I	.D.:	1542	te of Acce				Date of S Operator					
Average :					V 2:		Gravel Are	na 1•	40	Pile				
					527						Fasem	ent:		
					rden 1:									
					rden 2:						Lasem	ont		
Cell 4.					den 2.		L L							
	N. Pr	ospec	+ Ava	nue										
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											-			
										-			_	
			100											
						4	-	SIDEW	ALK"	4 *	*		=	1
++	++				PATTO	F			Pos	LCH			-	SA LLE
1000P					TAITO		Hou	ISE			CONC	WAY GETE		3 5
Tool		C-1			-DZ		D2.		-	+				N PROSECT ANGINE
1			17-10-10-1		4-		-1-							2
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		0-2			_	-	*				1	-		
			James Company											
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													=	5F1

EPA Site #: KCSR- 02	The same of the sa	
Screening Results: XRF I.D.: 1544 Average XRF Pb Screening Results (pp		Operator: LFI
Cell 1: 269.58 Cell 5:		1: Pile:
• Cell 2: 262.54 Cell 6:		1
o Cell 3: 181.68 Cell 7:		r .
Cell 4: DW 1:		
N. Prospect Avenue		
		C-2 C-1 C-1
The state of the s	SIDEWA	NEW WEST AND THE STATE OF THE S
C-3	+DZ House	
	Frous	60 9
	PorcH	7. 28.08
	SIDEMALK	+++++
		= 5F+

EPA Site #: KCSR- 177 Date of Access: 911118 Date of Screening: Screening Results: XRF I.D.: 1542 Date: 9/04/18 Operator: 6#	Contract Con
Average XRF Pb Screening Results (ppm)	
Cell 1: 120.57 Cell 5: DW 2: Gravel Area 1: Pile:	
•Cell 2: <u>304.17</u> Cell 6:•DZ: <u>327.81</u> Gravel Area 2: Alley Easen	nent:
• Cell 3: 171.94 Cell 7: Garden 1: Landscaping: Road Easen	
Cell 4:DW 1: <u>845, 48</u> Garden 2: Play Area:	
	-111
N. Prospect Avenue	*
DZ DZ	
	<u> </u>
House C1	1 2 3 3
SHED	Sip
C-2	A A
	1 5
DW	25.06
	7 2
G-1	C-3 Z
	*S
	= 5 _{FT}

EPA Site #: KCSR- 023 Screening Results: XRF I.D.: 15	-		Date of Screening:Operator:	
Average XRF Pb Screening Result	s (ppm)			
Cell 1: 131.32 Cell 5:	DW 2:	Gravel Area 1:	Pile:	
• Cell 2: 198.42 Cell 6:	DZ: 393.00	♣ Gravel Area 2: _	Alley Easement	:
Cell 3: 192.88 Cell 7:	Garden 1:	Landscaping:	Road Easement:	
Cell 4: DW 1:	Garden 2:	Play Area:		
Al Cascage Ava	lo (10			
N. Prospect Ave	nue			
	++	* * * *	* * * * * *	
	P2	House		<u> </u>
				AVENUE
			PORCH SIDEWALK	
	C+3			PROSPECT
GARAGE			C+2	
SIDEWALK				Ż
11111111				
				0-1
		1-1-1-1		
				
				J= 5f+

EPA Site #: KCSR- D74			
Screening Results: XRF I.D.: 154 Average XRF Pb Screening Results (p)		9127/18	Operator: L/4
• Cell 1: 156.41 Cell 5:		Gravel Area 1:	Pile:
Cell 2: 148.89 Cell 6:			
• Cell 3: 492.77 Cell 7:			
Cell 4: DW 1:			
N. Prospect Avenue			
0-1 0-2			
2 01			(!-3
HOUSE HOUSE	DZ	S S.	
CT Avo		E 0-	SHED SHED
¢-1 ¢-2			
			= 5 _{Fr}

EPA Site #: KCSR- 015			Date of Screening:
Screening Results: XRF I.D.: 150 Average XRF Pb Screening Results (p		9/24/18	Operator: <u>L/</u>
•Cell 1: <u>470.93</u> Cell 5:		Gravel Area 1:	Pile:
• Cell 2: 354.28 Cell 6:			
Cell 3: Cell 7:			*
Cell 4: DW 1:			
N. Montgall Avenue			
1			
House	3		3-2 C-2 SHED
Rame House Sideways Roech		PATIO	
SIDEWAY POECH			SIDGWALK
V C-1		\$	V
			□=5fr

5	Screen	ning Re	sults:		I.D.:	542						I						
ŕ	Avera	ge XRI	Pb S	creenin	ig Resu	lts (pp	om)											
-	Cell 1:	355	.19	_ Cell 5	:		_ DW	2:		Gra	ivel Are	ea 1:		Pile:	-			
	Cell 2:	281	78	_ Cell 6	:		•DZ:	6:	21.3.	Gra	ivel Are	ea 2:		_ Alley	Easen	nent: _		_
	Cell 3:	332.	רו	_ Cell 7			_ Gard	len 1:		Lar	dscapi	ng:		_ Road	Easen	nent: _		
	Cell 4:			_ DW 1	:		_ Gard	len 2:		Pla	y Area:			_			-	
L								-					 					
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			1		Sloan	ALK				02	I						10	1. MONTGALL
		d							PORCH			1 4				SIDEWA	ık.	Mon
-	-	SHED			C - 3	1		++	2	1-1		Hou	SE	1		1 500	-	ż
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-								+-1									PT 100-4-1-04-100	
																	= 5	FT

EPA Site #: KCSR- <u>027</u> Screening Results: XRF I.D.:			Date of Screening:
Average XRF Pb Screening Res		1/23//	operator
Cell 1: 321.3 Cell 5:	DW 2:	Gravel Area 1:	Pile:
• Cell 2: <u>170.83</u> Cell 6:	DZ:	Gravel Area 2:	Alley Easement:
Cell 3: (685.64 Cell 7:	Garden 1:	Landscaping:	Road Easement:
• Cell 4: 534.59 DW 1:	Garden 2:	Play Area:	
N. Montgall A	Manue.		
111111931111			
			N
2 *	C-#		Sheb
₹ 1 C-1	House	Pen Pen	
MONTGALL			
AVENIN		Porch	C-3 GARAGE
W. C	SIDEWALK		
* C-1	C-2		
		Manual Control (1611-160) Brown Hold Historica (1611-160) and the control of the	
			□ = 5 _{FT}

EPA Site #: KC					
Screening Results: Average XRF Pb Sc			: <u>9/24/18</u>	Operator: <i>LH</i>	_
Cell 1: 305.71			Gravel Area 1:_	Pile:	
· Cell 2: 666.41	Cell 6:	DZ:	Gravel Area 2: _	Alley Easeme	nt:
Cell 3:	Cell 7:	_ Garden 1:	Landscaping: _	Road Easeme	nt:
Cell 4:	DW 1:	_ Garden 2:	Play Area:		
N M .					
IN MONT	gall Avenue				*
					N
1					
N. Ma			4		
Monrage	G-1			C-2	
C S I					
Avenu					
			 		
	ALLEGA MARIE AND				
					A TO MATERIAL COLUMN A CONTRACT
					□= 5FT

Screening Res		Date of Access: 9////8 Date: 9/24//8 ppm)	Date of Screening:Operator:
		DW 2: Gravel Area 1:_	Pile:
1		-DZ: 313.51 Gravel Area 2:	
		Garden 1: Landscaping: _	
		Garden 2: Play Area:	
Ŋ. N	Montgall Avenue		
	A-1	DZ	A WW
	7 1	House	
			Sidewalk . Z
100 100 100 100 100 100 100 100 100 100			
4			
			□=5 _{FT}

EPA Site #: KCSR- 030 Date of Access: 9/12/18 Date of S	
Screening Results: XRF I.D.: 1542 Date: 9/24/18 Operator:	LH
Average XRF Pb Screening Results (ppm)	
• Cell 1: Cell 5: DW 2: Gravel Area 1:	_Pile:
• Cell 2: <u>285.</u> Cell 6:•DZ: <u>151.88</u> Gravel Area 2:	Alley Easement:
• Cell 3: 338.86 Cell 7: Garden 1: Landscaping:	Road Easement:
Cell 4: Play Area:	
Guinotte Avenue	
DZ 0-3	<u> </u>
House	
C-2 C-2	
DW-P	
Daireman & 3	
(Grave) (4	
SIDEMALK	
	= 5FT

EPA Site #: KCSR- 031 Date of Access: 9/12/18 Date of S	Screening:
Screening Results: XRF I.D.: 1542 Date: 9/24/18 Operator	:_LH
Average XRF Pb Screening Results (ppm)	
Cell 1: 179.52 Cell 5: DW 2: Gravel Area 1:	_Pile:
Cell 2: 288.61 Cell 6: DZ: 593.06 Gravel Area 2:	Alley Easement:
Cell 3: 387.54 Cell 7: Garden 1: Landscaping:	Road Easement:
Cell 4: DW 1: Garden 2: Play Area:	
Furnotte Avenue	
SHED	
C-3 DRIVEWAY (CONCRETE)	
	-
House	
1 0-2 1 1-2-2	
SIDEWALK	
	□= 5FT

	Date of Access: 9//		reening:
Screening Results: XRF I.D.: Consideration Average XRF Pb Screening Results		24//8 Operator:	L14
*Cell 1: 160.56 Cell 5:		ravel Area 1:	Pile:
*Cell 2: 176.95 Cell 6:			
•Cell 3: 164.09 Cell 7:			
• Cell 4: 1/09.55 DW 1:	<i>¥</i> 2		
N. Garland	BRUSH	-	
		0.2	N
		C-3	
	C-2	SHED	
	GAR-		
	TA M		
	GARDEN		
	5 5		
		CHURCH	
<u> </u>			
The state of the s		+DZ	
	- C-1 !		
	<u> </u>		
		34	
		Sidewalk	
		the state of the s	
De	RIVEWAY	C-4	
(A	ASPHALT)		
			□= 5fr
4	N. GARLAND AVENUE		>

EPA Site #: KCSR- <u>()33</u> Date of Access: <u>9/12//8</u> Date of Screening: Screening Results: XRF I.D.: <u>1542</u> Date: <u>9/27//8</u> Operator: <u>C.U.</u> Average XRF Pb Screening Results (ppm)	-
,	
Cell 1: 144.34 • Cell 5: 323.07 DW 2: Gravel Area 1: Pile:	
• Cell 2: <u>631.46</u> Cell 6: DZ: <u>1048.35</u> Gravel Area 2: Alley Easement:	
• Cell 3: 410,52 Cell 7: Garden 1: Landscaping: Road Easement:	
Cell 4: 278.85 DW 1: Garden 2: Play Area:	
N. Garland Avenue	
I	-
	7
C-3	+
Pap	1
DZ.	
House	k
Porch	
SHED SHED	-
C-1 C-2	1
	1
	*
SHED	*
	- -
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Fr

		Date of Access: 9		ate of Screening:	
		2 Date: <u>9</u>	1/25/18	perator: <u>L#</u>	
Average XRF Pb S		DW 2:	Gravel Area 1:	Pile	
VACOUNTED 11 11 11 11 11 11 11 11 11 11 11 11 11				Alley Easement:	
10.00.00				Road Easement:	
		Garden 2:			
Cell 4.			Tray Area.		
N. Gar	land Avenue				
_					
		* * * * * * *	1		
	PORCH	PORCH			
		House	Pario	C-3	
Z			14110		
GARLAND	C-1				
	D	STOCKALK			
AVEN	(ASPHANT)				
Nue				PA	1
d-2	C-	2		10	
	LANSCAPI	A)(a	£3 -	LANDSCAPING	
	LANSUAL				
	+++-+-				
				□ = 5	FT

EPA Site #: KCSR- 035 Screening Results: XRF I.D.: 5	Date	7	Date of Screening Operator: LH	
Cell 1: 238.91 Cell 5:	F	Gravel Area 1:	Pile:	
•Cell 2: 357.36 Cell 6:	DZ:	Gravel Area 2:	Alley Ea	sement:
• Cell 3: <u>424.51</u> Cell 7:	Garden 1:	Landscaping:	Road Ea	sement:
Cell 4: DW 1:	Garden 2:	Play Area:	278.66	
N. Washburn				
				1
SHED	SHED SAKED	House	2	ASH Avenue
PA	GARAGE		C-2	CI N. WASP
G-3				
				□ = 5FT

	Date of Access: 9/12//8 Date: 9/24//8 (ppm)	
	DW 2: Gravel Area 1:	Pile:
	DZ: Gravel Area 2:	
	Garden 1: 3/7.07 Landscaping:	1
Cell 4: DW 1:	Garden 2: <u>259.59</u> Play Area:	
N. Montgall Av	enue	
		I IN
	1-	
		1 1 1 1 1 1 1 1
		C-V
Pad	CARPORT DR	VEWAY GAR-2.
GARAGE PAD	House	PORCH SIDEWALK SIDEWALK
	INACLESSIBLE	
		□ = 5F _T

		Pate of Screening:
Average XRF Pb Screening Results:		perator: LH
	DW 2: Gravel Area 1:	Pile:
	•DZ: 1140.3 Gravel Area 2:	
	Garden 1: Landscaping:	18
	Garden 2: Play Area:	
- I are a second and a second a		
N. Montgall	Avenue	*
	DZ	
		A S
C-2.	House	PORCH SIDEWALK
		PORCI
	INACESSIBLE.	
		= 5+7

EPA Site #: KCSR- 038 Date of Access	: 9/12/18 Date of Screening:
Screening Results: XRF I.D.: 1542 Date	e: 9/25//8 Operator: <u>CH</u>
Average XRF Pb Screening Results (ppm)	
Cell 1: 356.17 Cell 5: DW 2:	
*Cell 2: 405.47 Cell 6:•DZ: 424.	Gravel Area 2: Alley Easement:
Cell 3: Cell 7: Garden 1:	Landscaping: Road Easement:
Cell 4: DW 1: Garden 2:	Play Area:
Rochester Avenue	
SHED	
	Cr2. 1, 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	02
	INACCESSIBLE & SEC
	9890
	DUSE 3800
	ozch J
L C1	
	EWHILE
← ROCHEST	ER AVENUE ->
	= 5FT

EPA Site #: KCSR- 039 Date of Access: 9/12/18	
Screening Results: XRF I.D.: 1542 Date: 9/25/18	Operator: LI+
Average XRF Pb Screening Results (ppm)	
Cell 1: <u>A79.3</u> Cell 5: DW 2: Gravel Area I:_	Pile:
Cell 2: 293.05 Cell 6:•DZ: 540.02 Gravel Area 2:	Alley Easement:
• Cell 3: <u>379.3</u> Cell 7: Garden 1: Landscaping:	Road Easement:
Cell 4: DW 1: Garden 2: Play Area:	
Rochester Avenue	
SHED	
GARAGE	
4 C-3	
Shep	
Day out	
PATIO VRIVEWAY CONCRETE)	
	₹.2
DZ DZ	
House	
CONCRETE CARPORT	
E CONCRETE CARPORT	
SIDEWALK	
ROCHESTER AVENUE	+> + + + - - - - - - - - - - - - - - - -
	□ = 5Fr

EPA Site #: KCSR- 040 Screening Results: XRF I.D.:	1542		Date of Screening:Operator:	
Average XRF Pb Screening Re		C1 A1	Dilar	
• Cell 1: 5 2.0 Cell 5:				
Cell 2: 436.81 Cell 6:				
Cell 3: <u>(487.69</u> Cell 7:				ent:
. Cell 4: <u>807.55</u> .DW 1: <u>5</u>	7.19 Garden 2:	Play Area:		
V. Prospect Avenue				
		¥		N
	03	Z-4		
		Sign		
•				1 1
	GARAGE			
	C-2	DRIVEWAY		
		(CONCRETE)		
 	1			
	House			
	1			
 	-DZ	DRIVEWAY (GRAVEL)		
			(
1	1 Parch			
*	6-1			
4	***			
C-1 <	SIDEWALK	CONCRETE		
-	N. PROSPECT AVENUE = 5FT			

AND THE PARTY OF T	Date of Access: 9/12/18	Date of Screening:			
Screening Results: XRF I.D.: 1542 Date: 9/24/18 Operator: 4					
Cell 1: <u>230.09</u> Cell 5:	Cell 1: 230.09 Cell 5: DW 2: Gravel Area 1: Pile:				
Cell 2: 456.77 Cell 6:	DZ: <u>821.22</u> Gravel Area 2: _	Alley Easement:			
Cell 3: Cell 7:	Garden 1: Landscaping:	Road Easement:			
Cell 4: DW 1:	Garden 2: Play Area:				
N. Prospect Avenue					
IN. Prospect Avenue					
	C-2				
	PATIO				
	House				
	2				
	C-1 00 C-1				
	SIDEWALK				
	C-1				
*	— N. PROGRECT AVENUE →				
		□ = 5f _f			

EPA Site #: KCSR- 042 Date of Access: 12 18 18 Date of Screening: 12 19 18 Screening Results: XRF I.D.: 1532 Date: 12 19 18 Operator: 14 Average XRF Pb Screening Results (ppm)		
Cell 1: 3215.4 C	Cell 5: 1113.0 DW2: 2818.8 Gravel Area 1:	
Cell 4: 822.91 DW 1: Garden 2: Play Area:		
Guinotte Ave GUINOTTE AVENUE		
V ParkAve	Dream House Porch Ramp Concrete Driveway Pap C-1 Auey->	2E-1
DZ -2	CONCRETE LORDING DOCK ELEGANTE : DESCRIS. SAND TILE LIGHTWEIGHT COOFING TILE (-4	/N = 10FT

UNION PACIFIC RAILROAD!

APPENDIX C PROPERTY MAPS























Cell boundary

Drip zone

Cell ID

(121) XRF lead result (ppm)

ppm Parts per million

XRF X-ray fluorescence

Kansas City, Missouri

Property ID: KCSR-011 XRF Sreening Map



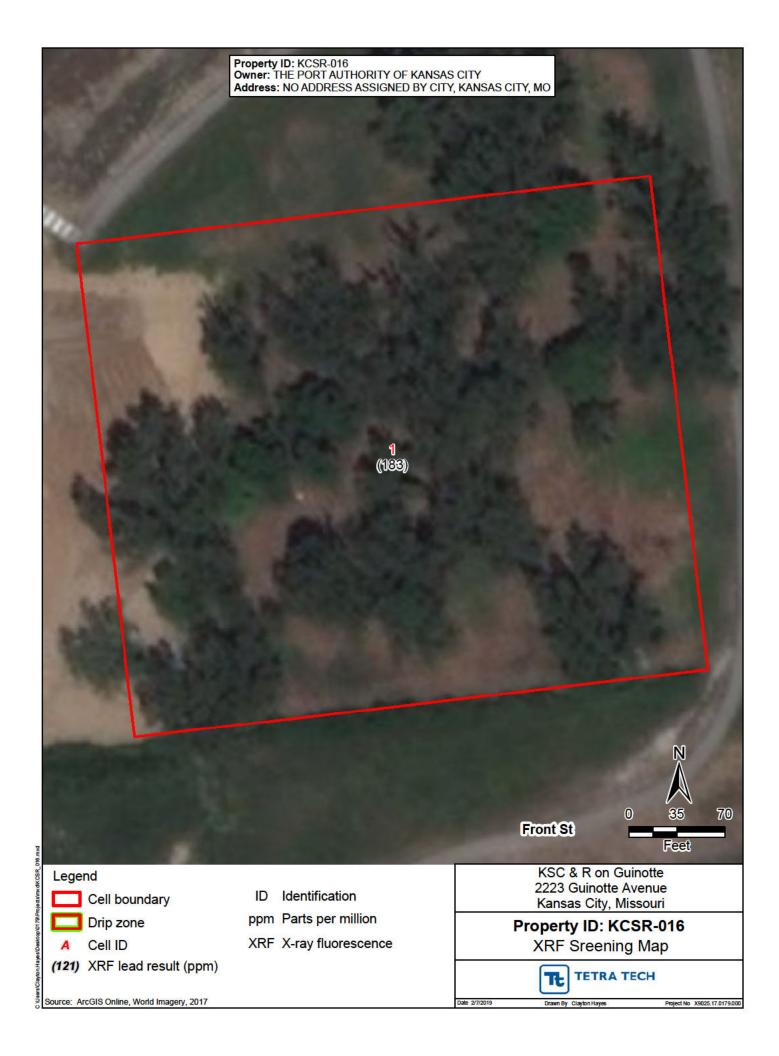
Source: ArcGIS Online, World Imagery, 2017













Cell boundary

Drip zone

Cell ID

(121) XRF lead result (ppm)

ID Identification

ppm Parts per million

XRF X-ray fluorescence

Kansas City, Missouri

Property ID: KCSR-017 XRF Sreening Map



Source: ArcGIS Online, World Imagery, 2017





























Cell boundary

Drip zone

Cell ID

(121) XRF lead result (ppm)

ID Identification

ppm Parts per million

XRF X-ray fluorescence

Kansas City, Missouri

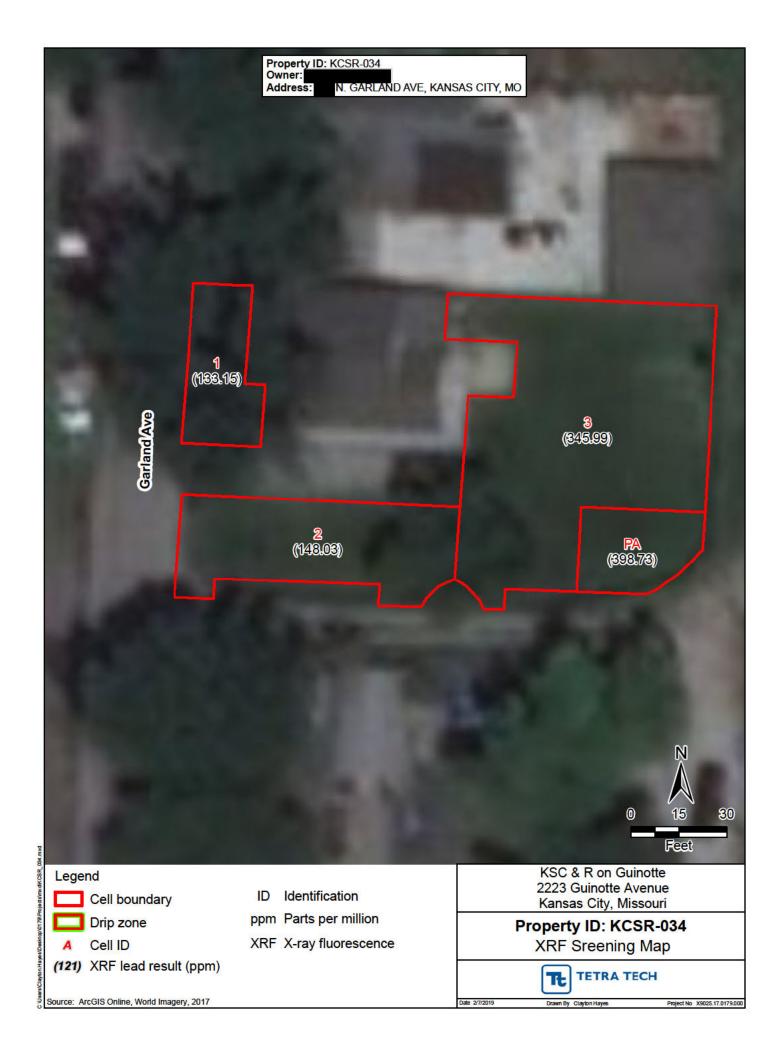
Property ID: KCSR-031 XRF Sreening Map

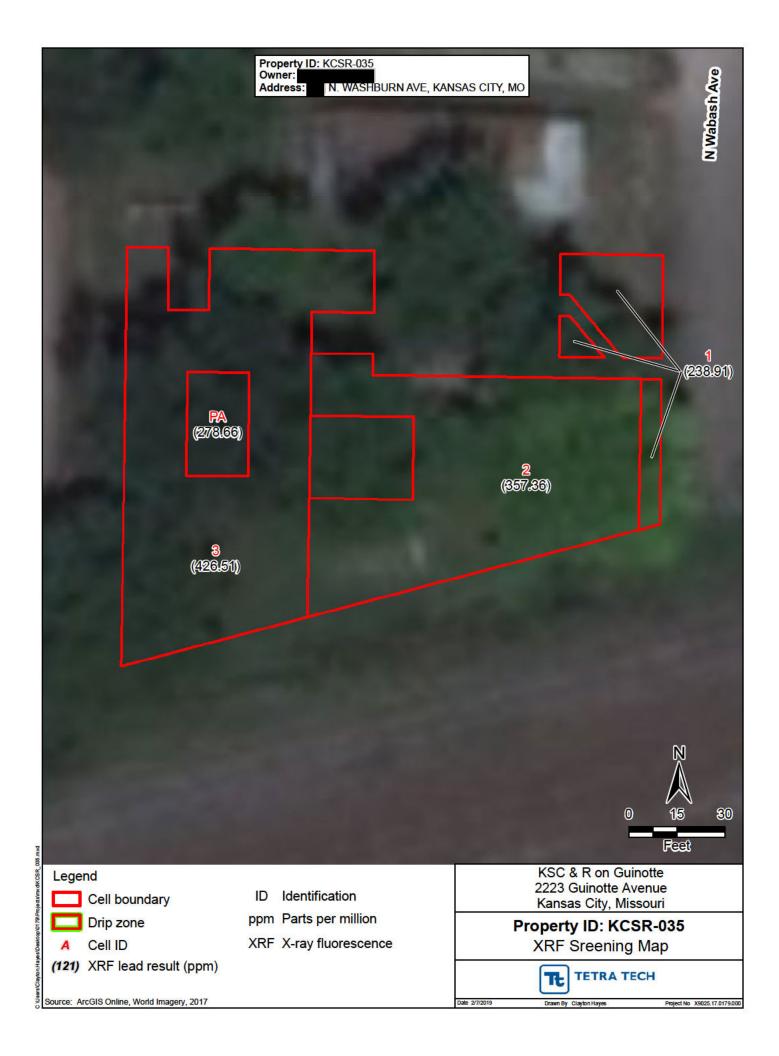


Source: ArcGIS Online, World Imagery, 2017





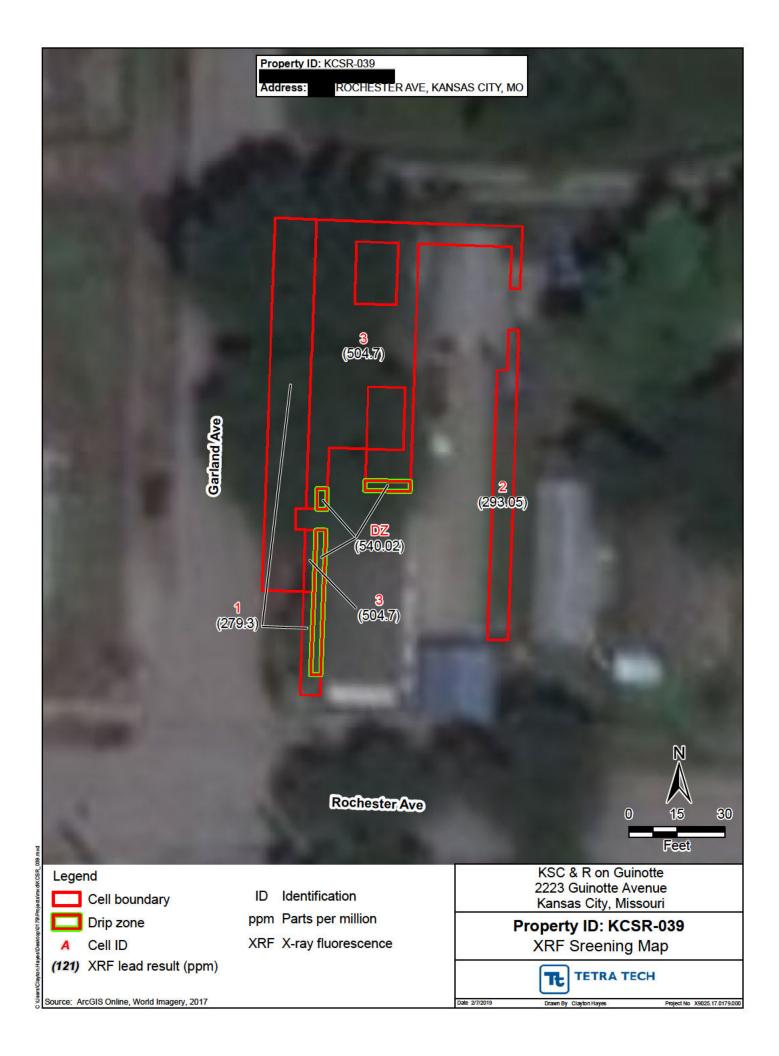


















APPENDIX D SUMMARY OF ASSESSED PROPERTIES

SUMMARY OF ASSESSED PROPERTIES

SUMMARY OF ASSESSED RESIDENTIAL PROPERTIES KCS&R ON GUINOTTE SITE – KANSAS CITY, MISSOURI

Property ID	Address	Greatest Lead Concentration (mg/kg)	Date Screened
KCSR-001	Guinotte Avenue		
KCSR-002	Guinotte Avenue	361.63	8/1/17
KCSR-003	Guinotte Avenue	292.93	8/1/17
KCSR-004	N Garland Avenue	600.15	8/1/17
KCSR-005	Guinotte Avenue	545.65	8/1/17
KCSR-006	Unassigned (lot north of Guinotte Avenue)	267.01	8/1/17
KCSR-007	Guinotte Avenue	393.71	8/1/17
KCSR-008	Guinotte Avenue	369.85	8/1/17
KCSR-009	Guinotte Avenue	503.79	8/2/17
KCSR-010	Guinotte Avenue 526.09		8/2/17
KCSR-011	Wabash Avenue	404.91	8/2/17
KCSR-012	N Wabash Avenue	439.05	8/2/17
KCSR-013	Guinotte Avenue (mobile home lot)	189.62	8/2/17
KCSR-014	Guinotte Avenue (house)	269.87	8/2/17
KCSR-015	Nicholson Park (background)	31.48	8/2/17
KCSR-016	Berkley Riverfront Park (background)	182.65	8/2/17
KCSR-017	N Prospect Avenue	553.65	9/6/18
KCSR-018	N Garland Avenue	270.89	9/11/18
KCSR-019	Guinotte Avenue	375.8	9/11/18
KCSR-020	N Prospect Avenue	579.74	9/11/18
KCSR-021	N Prospect Avenue	269.58	9/11/18
KCSR-022	N Prospect Avenue	304.17	9/11/18
KCSR-023	N Prospect Avenue	198.42	9/11/18
KCSR-024	N Prospect Avenue	492.77	9/11/18
KCSR-025	N Montgall Avenue	670.93	9/11/18
KCSR-026	N Montgall Avenue	355.19	9/11/18
KCSR-027	N Montgall Avenue	685.64	9/11/18
KCSR-028	N Montgall Avenue	666.41	9/11/18
KCSR-029	N Montgall Avenue	285.78	9/11/18
KCSR-030	Guinotte Avenue	338.86	9/12/18
KCSR-031	Guinotte Avenue	387.54	9/12/18
KCSR-032	N Garland Avenue	176.95	9/12/18
KCSR-033	N Garland Avenue	631.46	9/12/18
KCSR-034	N Garland Avenue	345.99	9/12/18
KCSR-035	N Wabash Avenue	426.51	9/12/18
KCSR-036	N Montgall Avenue	317.07	9/12/18
KCSR-037	N Montgall Avenue	712.72	9/12/18
KCSR-038	Rochester Avenue	405.47	9/12/18
KCSR-039	Rochester Avenue	293.05	9/12/18
KCSR-040	N Prospect Drive	807.55	9/12/18
KCSR-041	N Prospect Drive	456.77	9/12/18

Notes:

 $\textbf{Bolded} \ \text{result indicates an average lead concentration greater than } 400 \ \text{mg/kg}.$

ID Identification

mg/kg Milligrams per kilogram

APPENDIX E

TABLES

TABLE 1
SUMMARY OF XRF AND LABORATORY CONFIRMATION SAMPLES KCS&R ON GUINOTTE SITE – KANSAS CITY, MISSOURI

Sample Number	Property ID	Cell	Pb Lab (mg/kg)	Pb XRF (mg/kg)		
Residential Properties						
7556-1	KCSR-001	C-3	286	342		
7556-2	KCSR-010	C-1	344	274		
7556-3	KCSR-012	C-1	439	414		
7556-4	KCSR-013	C-1	190	162		
7556-5	KCSR-016	C-1	183	149		
8079-1	KCSR-018	C-2	238	234		
8079-2	KCSR-020	C-1	497	496		
8079-3	KCSR-023	C-3	193	200		
8079-4	KCSR-025	C-1	671	691		
8079-5	KCSR-027	C-3	686	708		
8079-6	KCSR-030	C-1	162	208		
8079-7	KCSR-032	C-3	166	181		
8079-8	KCSR-033	C-2	631	564		
8079-9	KCSR-034	PA-1	399	451		
8079-10	KCSR-035	C-1	239	229		
8079-11	KCSR-037	C-2	391	344		
8079-12	KCSR-038	C-2	405	382		
Former KCS&R Property						
8102-1	KCSR-042	C-1	3215	4230		
8102-2	KCSR-042	DZ-1	2819	3030		
8102-3	KCSR-042	RE-1	375	393		
8102-4	KCSR-042	C-4	823	924		
8102-5	KCSR-042	C-5	1113	1130		
8102-6	KCSR-042	RE-2	885	981		
8102-7	KCSR-042	DZ-2	697	823		
8102-8	KCSR-042	C-3	474	464		
8102-9	KCSR-042	C-2	1461	2290		

Notes: $r^2 = 0.971916$

mg/kg Milligrams per kilogram

Pb Lead

 $\begin{array}{ll} \text{ID} & \text{Identification Number} \\ r^2 & \text{Regression coefficient} \\ \text{XRF} & \text{X-ray fluorescence} \end{array}$

TABLE 2
SUMMARY OF RCRA METALS IN SURFACE SOIL SAMPLES
KCS&R ON GUINOTTE SITE – KANSAS CITY, MISSOURI

					Metals			
Sample Number	Date Collected	Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver
9 0 2			A	Conc	entration (mg	/kg)		
19			Residential	Properties				
KSCR-001, C-3	8/1/2017	11	320	13.4 J	14.1	342	10.4 UJ	2.1 U
KCSR-010, C-1	8/1/2017	9.2	174	5.8	11.6	274	10.2 U	2.0 U
KCSR-012, C-1	8/1/2017	11.3	236	12.3	16.2	414	10.4 U	2.1 U
KCSR-013, C-1	8/1/2017	6.3	150	5.9	14.8	162	10.5 U	2.1 U
KCSR-016, C-1	8/1/2017	5.8	98.5	5.3	15.2	149	10.4 U	2.1 U
KCSR-018, C-2	9/11/2018	9	207	5.4	18.5	234	3.6 UJ	1.0 U
KCSR-020, C-1	9/11/2018	17.8	273	7.3	31.5	496	3.5 UJ	0.99
KCSR-023, C-3	9/11/2018	8.3	245	5.6	17.7	200	3.5 UJ	1
KCSR-025, C-1	9/11/2018	10.6	241	5.3	19.7	691	3.4 UJ	0.97 U
KCSR-027, C-3	9/11/2018	18.6	387	14.5	24.1	708	3.5 UJ	1
KCSR-030, C-1	9/12/2018	6.4	179	4.5	21.4	208	3.7 UJ	1.0 U
KCSR-032, C-3	9/12/2018	7.4	228	4.2	31.1	181	3.5 UJ	1.0 U
KCSR-033, C-2	9/12/2018	11.9	429	9.3	32.8	564	3.2 UJ	0.92 U
KCSR-034, PA-1	9/12/2018	12.4	389	9.3	26.4	451	3.5 UJ	1.0 U
KCSR-035, C-1	9/12/2018	31.7	222	5.1	24.2	229	3.4 UJ	0.98 U
KCSR-037, C-2	9/12/2018	12.5	291	10.5	27.2	344	3.4 UJ	0.98 U
KCSR-038, C-2	9/12/2018	12.1	341	26.3	22.8	382	3.4 UJ	0.97 U
EPA Regional Screen	ning Level	0.68	1,500	7.1	NE	400	39	39
(residential)	20.0	(CERTIFIED)	81.50.2080.00	ESERGE R	1/2/2014/20	400	39	39
		Fo	rmer KCS	&R Propert	y			
KCSR-042, C-1	12/18/2018	30.2	457	2.3	17.9	4230	10.3 U	2.1 U
KCSR-042, DZ-1	12/18/2018	23.9	363	2.2	16.5	3030	10.1 U	2.0 U
KCSR-042, RE-1	12/18/2018	8.7	108	1.0 U	13.6	393	9.6 U	1.9 U
KCSR-042, C-4	12/18/2018	6.4	74	1.0 U	12	924	10.0 U	2.0 U
KCSR-042, C-5	12/18/2018	19.9	128	1.6	11.4	1130	10.2 U	2.0 U
KCSR-042, RE-2	12/18/2018	6.6	127	1.0 U	15.3	981	10.0 U	2.0 U
KCSR-042, DZ-2	12/18/2018	5.9	87	1.0 U	8.4	823	10.2 U	2.0 U
KCSR-042, C-3	12/18/2018	33.5	130	12.2	22.6	464	10.9 U	2.2 U
KCSR-042, C-2	12/18/2018	95.2	209	6.3	12.7	2290	10.7 U	5.6
EPA Regional Screer (industrial)	ning Level	3	22,000	98	NE	800	580	580

Notes:

Bolded text indicates values above regional screening levels.

J Estimated value

mg/kg Milligrams per kilogram

NE Not established

RCRA Resource Conservation and Recovery Act

U Analyte not detected at concentration above method detection limit

SUMMARY OF BIOAVAILABILITY SAMPLE RESULTS KCS&R ON GUINOTTE SITE – KANSAS CITY, MISSOURI

TABLE 3

Sample Number	Percent Relative Lead Bioavailability	XRF Lead Value (mg/kg)
KCSR-001, C-3	68	342
KCSR-010, C-1	70	274
KCSR-012, C-1	67	414
KCSR-013, C-1	66	162
KCSR-016, C-1	63	149

Notes:

EPA U.S. Environmental Protection Agency

ID Identification

mg/kg Milligrams per kilogram
UC University of Colorado
XRF X-ray fluorescence

APPENDIX F FIELD SHEETS AND CHAIN-OF-CUSTODY RECORDS

CHAIN OF CUSTODY RECORD ENVIRONMENTAL PROTECTION AGENCY REGION VII

EPA PROJECT MANAGER	(Print)				SAMPLING EVE						D/	TE OF SAM	IPLE COL	2018	SHE	
Joe Davis				KCS	ERON	Guinott	۲					HTHOW	DAY	YEAR	/ of	
				•••		OF SHIPMI										
100 410	1	4 \ /2	. TYPE O	F CONTAINE			T		PLED	MEDI	A T		RECE	IVING LABOR	RATORY	
ASR AND SAMPLE	1 L PLASTIC BOTTLE	745	_			VOA SET	1	Т	발		OTHER		REMARK	(s other inf	ORMATION	
NUMBER	BOTTLE	-60711125		BOTTLE	BOTTLE SAMPLE NUMBER	(3 VIALS EA)	WATER	SOLIS	HAZ WASTE	5				n of samples u sample numb		
8079-1		(andii o i an	JAN EL HOMBEN		Ť	1	_	Ì						
8079-5		1					 	1	_	T						
8079-3		1-1-			<u> </u>		\top	✝		┞						
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0019-7		+ +					╁	+	_	\vdash						
8079-5							╀	X	_	\vdash						
8079-6		+	+				-	×	_	 						
8079-7				<u>-</u>			╀	X		┡				····		
8079-8		1 1		······································			<u> </u>	X		L					,	
8079-9							<u> </u>	X	L.				, , , , , , , , , , , , , , , , , , ,			
8079-10							$oldsymbol{ol}}}}}}}}}}}}}}$	×		<u> </u>					·	
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102 6/120	1(0). 011121						`	الغايكرر			ONVE	166	(SHIP	PING AIRBI	ILL NUMBE	R)
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7-EPA-9262 (REV 4/17) Other Ve	UNSEA		WE	 TE ORIGI	SEALED		UNS PROJ				R	_l	<u>L</u>	raye	8 of 20	

ASR Number:	8079 Sa i	nple Number:	1,	QC Co	de:	Matri	x: Solid Tag	ID: 8079-1
Project ID: Project Desc:		n Guinotte samı	olina	Pro	ject Mana	ger:	Joe Davis	
-	Kansas Cit	-			St	tate:	Missouri	
-	Superfund KCS & R O	N GUINOTTE - S	Site Eva	luation	/Dispositior	n	Site ID: B7E1	Site OU: 00
Location Desc		N Garland	Augr	ue	(0-2)			
KCSR-	318	E	externa	al Samp	ole Numbe	er:		
Expected Conc	::	(or Circle One:	Low i	vedium	High)		Date	Time(24 hr)
Latitude:			Samp	le Coll	ection: St	art:	9/11/13	<u>્વ: ગુ</u> ર
Longitude:		<u>.</u>			E	nd:	_/_/	_:_
Laboratory Ar	nalyses:							
Container	Prese	rvative	Holding	ı Time	Analysis			
1 - 8 oz glass	4 Deg	С	180	Days	1 Total Met	tals An	alysis of TCLP Meta	ils in Soil by ICP-AES
Sample Comm	ents:							
(N/A)								

Max KRF: DUD, 35 ppm

ASR Number: 8)79 Sample Number:	2 QC Co	de: Matr	ix: Solid Tag	ID : 8079-2
Project ID:]			oject Manager:	Joe Davis	
City:	(CS & R on Guinotte sam (ansas City	pling	State:	Missouri	
Program: 5 Site Name: 1	CCS & R ON GUINOTTE -	Site Evaluation	/Disposition	Site ID: B7E1	Site OU : 00
Location Desc:	KCSR-020	NP	nospect owe	nue (c-i)	
		External Sam	ple Number:		
Expected Conc:	(or Circle One:	Low Medium	n High)	Date	Time(24 hr)
Latitude:		Sample Col	lection: Start:	<u>9/11/18</u>	10:11
Longitude:			End:		
Laboratory Ana	lyses:	· · · · · · · · · · · · · · · · · · ·			
EGDOLGEOLA MILE					
Container	Preservative	Holding Time			ils in Soil by ICP-AES

Max LEF: 502.71 ppm

ASR Number:	8079 Sample Number:	3 QC Coc	le: Matr	ix: Solid Tag	ID: 8079-3					
Project ID: Project Desc:		7E1 Project Manager: Joe Davis S & R on Guinotte sampling								
-	Kansas City		State:	Missouri						
Program:	•				4					
Site Name:	KCS & R ON GUINOTTE - S	Site Evaluation/	Disposition	Site ID: B/E	1 Site OU: 00					
Location Desc:	KUSR-053	7	. Prospeat	Dueme	(C-3)					
	E	xternal Samp	le Number: _							
Expected Conc	(or Circle One:	Low Medium	High)	Date	Time(24 hr)					
Latitude:	MANAGEMENT MANAGEMENT STREET,	Sample Colle	ection: Start:	9/11/18	11:72					
Longitude:			End:	//	;					
Laboratory An	alyses:	······································	***************************************							
Container	Preservative	Holding Time								
1 - 8 oz glass	4 Deg C	180 Days	1 Total Metals A	nalysis of TCLP Met	tals in Soil by ICP-AES					
Sample Commo	ents:									
(81/8)										

(N/A)

Max XRF: 209.52 ppm

Sample Collected By: TT

ASR Number:	8079 Sample Number:	4 QC Co	de: Matı	rix: Solid	Tag ID: 8079-4
Project ID:			ject Manager	: Joe Davis	3
-	KCS & R on Guinotte sam Kansas City Superfund	pling	State	: Missouri	
	KCS & R ON GUINOTTE -	Site Evaluation	/Disposition	Site ID:	B7E1 Site OU: 00
Location Desc:	KCSQ-005	N	. Montgai	1 Aver	we (C-1)
	E .	External Samp	ole Number:		
Expected Conc	: (or Circle One:	Low Medium	High)	Date	Time(24 hr)
Latitude:	***************************************	Sample Coll	ection: Start:		8 12:10
Longitude:			End:		;
Laboratory An	-				
Container 1 - 8 oz glass	Preservative 4 Deg C	Holding Time 180 Days	_	Analysis of TC	LP Metals in Soil by ICP-AES
Sample Comme	ents:	····	***************************************		
(N/A)					

Max XRF: 731.97 ppm

Sample Collected By: TT

ASR Number:	8079 Sample Number:	5	QC Cod	le: Matr	ix: Solid	Tag I	D: 8079-5					
Project ID:	JDB7E1 KCS & R on Guinotte samp	olina	Pro	ject Manager:	Joe Davis	3						
	Kansas City	nsas City State: Missouri										
-	KCS & R ON GUINOTTE - S	Site Eva	aluation/	Disposition	Site ID:	B7E1	Site OU: 00					
Location Desc:	KUSR-027		N. M	ontsall A	nemel	(C-	3)					
	E	xterna	al Samp	le Number: _			***************************************					
Expected Conc	: (or Circle One:	Low	Medium	High)	Date		Time(24 hr)					
Latitude:		Samp	ole Colle	ection: Start:	9/11/1	8	1 <u>2:50</u>					
Longitude:				End:		_						
Laboratory An	alyses:	··········										
Container	Preservative	Holding		Analysis			. In Call burton AEC					
1 - 8 oz glass		180	Days	1 Total Metals A	nalysis of TC	LP Metals	in Soil by ICP-AES					
Sample Commo	ents:											
(N/A)												
HUX XRF.	730.63 ppm											

Sample Collected By: $\top\!\!\!\top$

ASR Number: 8	8079 Sample Number:	6 QC Code:	Matri	ix: Solid Tag	ID: 8079-6
Project ID:		-	: Manager:	Joe Davis	,
-	KCS & R on Guinotte sam Kansas City	pling	State:	Missouri	
Program: Site Name:	Superfund KCS & R ON GUINOTTE -	Site Evaluation/Disp	position	Site ID: B7E1	Site OU: 00
Location Desc:	KC32-030	GuinoHe	Duenus	R (C-1)	
	1	External Sample N	lumber: _		
Expected Conc	: (or Circle One:	Low Medium Hig	ıh)	Date	Time(24 hr)
Latitude:	e-ruerens neuroscon promotor	Sample Collection	on: Start:	9/12/18	OL:P0
Longitude:			End:	/	_:_
Laboratory An	alyses:			**************************************	
Container 1 - 8 oz glass	Preservative 4 Deg C	-	nalysis Total Metals Ai	nalysis of TCLP Meta	Is in Soil by ICP-AES
Sample Commo	ents:			<u> </u>	
(N/A)	0.21				
Marx RF.	169.21 ppm				

Sample Collected By: TT

ASR Number:	8079 Sample Number:	7	QC Cod	le: Matı	ix: Solid	Tag I	D: 8079-7
Project ID:		مالتم	Pro	ject Manager	: Joe Davis		
City:	KCS & R on Guinotte samp Kansas City	oling		State	: Missouri		
Program: Site Name:	KCS & R ON GUINOTTE - S	Site Ev	aluation/	Disposition	Site ID:	B7E1	Site OU: 00
Location Desc:	KGR-032 .		1	. Garland	Avena	(C-	3)
•	E	xtern	al Samp	le Number:			
Expected Conc	: (or Circle One:	Low	Medium	High)	Date		Time(24 hr)
Latitude:		Sam	ple Colle	ection: Start:	9/12/18	3	1 <u>0:0</u> 0
Longitude:	WASSERS			End:	_/_/_	_	_:_
Laboratory An	alyses: Preservative	Holdin	g Time	Analysis			
1 - 8 oz glass	4 Deg C	180	Days	1 Total Metals A	nalysis of TCL	P Metals	in Soil by ICP-AES
Sample Commo	ents:						
(N/A)							
MARXRE	:176.76 ppm						

Sample Collected By: TT

ASR Number:	8079	Sample Number:	8	QC Cod	le: Matr	ix: Solid	Tag I	: D: 8079-8
Project ID:				Pro	ject Manager:	Joe Davis	5	
City:	Kansas	•	oling		State:	Missouri		
Program: Site Name:	•	R ON GUINOTTE - S	Site Ev	aluation/	Disposition	Site ID:	B7E1	Site OU: 00
Location Desc:	KCS	R.033			N. Garland	y Avery	۷ ((1-2
		E	extern	al Samp	le Number:			
Expected Conc	ï	(or Circle One:	Low	Medium	High)	Date		Time(24 hr)
Latitude:			Sam	ple Coll	ection: Start:	9/12/1	8	1 0 : 30
Longitude:					End:		_	:
Laboratory Ar								
Container , 1 - 8 oz glass		r eservative Deg C	Holdin 180	g Time Days	=	nalysis of TC	LP Metal	s in Soil by ICP-AES
Sample Comm	ents:							
(N/A)								
MAX XEF:	932.	67 ppm						

Sample Collected By: $\top\!\!\!\top$

ASR Number:	8079 Sample Num	ber: 9	QC Cod	le: Matr	ix: Solid T	Tag ID: 8079-9
Project ID:	JDB7E1		Pro	ject Manager:	Joe Davis	
Project Desc:	KCS & R on Guinotte	sampling				
City:	Kansas City			State:	Missouri	
Program:	Superfund					
Site Name:	KCS & R ON GUINOT	TE - Site E	valuation/	Disposition	Site ID: B	7E1 Site OU: 00
Location Desc	FRETTH KS	R-034		N. Garian	d Avenue	(PA-1)
		Exteri	nal Samp	le Number: _		
Expected Conc	(or Circle	One: Low	Medium	High)	Date	Time(24 hr)
Latitude:		San	nple Colle	ection: Start:	9/12/18	1 <u>0 : 4</u> 8
Longitude:	NAMES AND ADDRESS OF THE PARTY			End:	//	***************************************
Laboratory Ar	nalyses:		***************************************			······································
Container	Preservative	Holdi	ng Time	Analysis		
1 - 8 oz glass	4 Deg C	180) Days	1 Total Metals A	nalysis of TCLP	Metals in Soil by ICP-AES
Sample Comm	ents:					

(N/A)

max XRF : 409.73ppm

ASR Number: 8	3079 Sample Number:	10	QC Cod	e: Matri	ix: Solid 1	fag ID: 8079-10
Project ID:			Proj	ect Manager:	Joe Davis	
-	KCS & R on Guinotte samp Kansas City	ling		State:	Missouri	
Program:	•			State.	111550uii	
_	KCS & R ON GUINOTTE - S	Site Ev	aluation/	Disposition	Site ID: B	7E1 Site OU: 00
Location Desc:	KCSR-035 N-V			J. (Nayybhx)		
Expected Conc	(or Circle One:	Low	Medium	Hìgh)	Date	Time(24 hr)
Latitude:		Sam	ple Colle	ection: Start:	9/12/18	17:00
Longitude:	***************************************			End:	_/_/_	
Laboratory An	alysės:	Haldin	a Time	Analysis		
1 - 8 oz glass		180	_		nalysis of TCLP	Metals in Soil by ICP-AES
Sample Comme	ents:					
(N/A)						
Max XRF;	242.85pm					

Sample Collected By: TT

ASR Number:	8079 Sample Number:	11	QC Cod	e:	Matri	x: Solid	Tag I	D: 8079-11
Project ID: Project Desc:	JDB7E1 KCS & R on Guinotte sam	oling	Proj	ect Man	ager:	Joe Davis		
	Kansas City	_		S	State:	Missouri		
Program:	Superfund							
Site Name:	KCS & R ON GUINOTTE - :	Site Eval	luation/l	Dispositio	on	Site ID:	B7E1	Site OU: 00
Location Desc:	KC3R-037	ſ	N. Me	nesai	1 2	venue	(0	- 2)
	F	xterna	l Sampl	e Numb	er: _			
Expected Conc	(or Circle One:	Low M	1edium	High)		Date		Time(24 hr)
Latitude:		Samp	ie Colle	ction: S	tart:	1/1418		(3:15
Longitude:					End:	//		
Laboratory Ar	nalyses:							
Container	Preservative	Holding	Time	Analysis	S			
1 - 8 oz glass	4 Deg C	180	Days	1 Total M	etals An	alysis of TCLI	P Metals	In Soil by ICP-AES
Sample Comm	ents:							

(N/A)

Max XRF: 411.41

ASR Number:	8079 Sample Number:	12 QC C	ode: Mati	rix: Solid Tag	ID: 8079-12
Project ID:	JDB7E1 KCS & R on Guinotte samp		roject Manager	: Joe Davis	
-	Kansas City	Jillig	State	: Missouri	
_	KCS & R ON GUINOTTE - S	Site Evaluatio	n/Disposition	Site ID: B7E1	Site OU: 00
Location Desc:	KC5R1038	RO	chester Auea	nue ((-2)	
	6	External San	nple Number:		
Expected Conc	: (or Circle One:	Low Mediu	m High)	Date	Time(24 hr)
Latitude:		Sample Co	llection: Start:	9_112/18	13:30
Longitude:			End:		_:_
Laboratory Ar	-				
Container 1 - 8 oz glass	Preservative 4 Deg C	Holding Time 180 Days	•	Analysis of TCLP Meta	ls in Soil by ICP-AES
Sample Comm	ents:				
(N/A)					

Sample Collected By: TT

Max XRF: 417.46

CHAIN OF CUSTODY RECORD ENVIRONMENTAL PROTECTION AGENCY REGION VII

EPA P	OJECT MANAGER	(Print)				SITE OR S	SITE OR SAMPLING EVENT #8102					Ī	DATE OF SAM	PLECOLLECTION	S) SHE	ET ,		
	1. Smith		. 17									MONTH	DAY YEAR	~ of		_		
		MA	ick				CONTENTS	OF SHIPME										_
	ASR AND	1 ka	â 1		TYPE O	F CONTAINES	is	VOA SET	\vdash		PLED P	WEDI	IA OTHER	-	RECEIVING LA REMARKS OTHER			
	SAMPLE NUMBER	BOTT	Œ	BOTTLE		SOTTLE	BOTTLE AMPLE HUMBER	(3 VIALS EA)	WATER	anos	HAZ WASTE	A.			condition of sampl) other sample nu			1
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ASR Number:	8102 Samp	le Number:	1	QC Co	de:	Matri	x: Solid	Tag I	D: 8102-1
Project ID: Project Desc:		Guinotte sam	pling	Pro	oject Mana	ger:	Yvonne Si	nith	
	Kansas City				St	ate:	Missouri		
_	Superfund KCS & R ON (GUINOTTE -	Site Eva	luation	/Disposition	1	Site ID:	B7E1	Site OU: 00
Location Desc:	KCSQ -	042	C-1						
		ı	Externa	l Sam	ple Numbe	:r: _			.www.agu
Expected Conc	: (or	Circle One:	Low N	1edium	High)		Date		Time(24 hr)
Latitude:		-	Samp	le Col	ection: Sta	art:	12/18/18	3	12:50
Longitude:		-			E	nd:	//	-	***************************************
Laboratory Ar	nalyses:						·		
Container	Preserva	tive	Holding	Time	Analysis				
1 - 8 oz giass	4 Deg C		180	Days	1 Total Met	tals An	alysis of TCL	P Metals	s in Soil by ICP-AES
1 - 8 oz glass	4 Deg C		180	Days	1 TCLP Met	tals in	Soil		
0 -	4 Deg C		0	Days	1 Percent S	Solid			

Sample Comments:

(N/A)

Max XRF: 3560 ppm

XRF# 1532

KCSR-042 C-1

Sample Collected By: TT

ASR Number:	8102 Sample Number:	2	QC Cod	de: Matr	ix: Solid 1	Tag ID: 8102-2
Project ID:			Pro	ject Manager:	Yvonne Sm	ith
-	KCS & R on Guinotte sam	oling				
"	Kansas City			State:	Missouri	
Program:	•					
Site Name:	KCS & R ON GUINOTTE - !	Site Eva	luation,	/Disposition	Site ID: B	7E1 Site OU: 00
Location Desc:	KCS12-042	DZ.				
	E	Externa	ıl Samp	ole Number: _		
Expected Conc	: (or Circle One:	Low 1	Medium	High)	Date	Time(24 hr)
Latitude:	and the second s	Samp	le Coll	ection: Start:	12/18/10	12:05
Longitude:				End:	_/_/_	<u></u> :
Laboratory Ar	nalyses:					
Container	Preservative	Holding	Time	Analysis		
1 - 8 oz glass	4 Deg C	180	Days	1 Total Metals A	nalysis of TCLP	Metals in Soil by ICP-AES
1 - 8 oz glass	4 Deg C	180	Days	1 TCLP Metals in	Soil	
0 -	4 Deg C	0	Days	1 Percent Solid	<u>.</u>	

Sample Comments:

(N/A)

Max XRF: 2923 ppm XRF # 1532 KCSK-042 DZ-1

ASR Number:	8102 Sample Number:	3 QC C	ode: Matr	ix: Solid Tag	ID: 8102-3
Project ID:	YSB7E1 KCS & R on Guinotte sam		roject Manager:	Yvonne Smith	
	Kansas City	piirig	State:	Missouri	
Program:	·				
Site Name:	KCS & R ON GUINOTTE - :	Site Evaluatio	n/Disposition	Site ID: B7E1	Site OU: 00
Location Desc:	KCSp-042	RE-	.1		
	ı	External Sar	nple Number:		
Expected Conc	(or Circle One:	Low Mediu	m High)	Date	Time(24 hr)
Latitude:		Sample Co	llection: Start:	12/18/18	12:10
Longitude:			End:	/	:
Laboratory An	alyses:				
Container	Preservative	Holding Time	Analysis		•
1 - 8 oz glass	4 Deg C	180 Days	 Total Metals A 	nalysis of TCLP Meta	ls in Soil by ICP-AES
1 - 8 oz glass	4 Deg C	180 Days	1 TCLP Metals in	n Soil	
0 -	4 Deg C	0 Days	1 Percent Solid		

Sample Comments:

(N/A)

Max VRF: 382 ppm XRF # 1532 KOSE·042 RE-1

ASR Number:	8102 Sample Numbe	er: 4	QC Co	de: Matr	ix: Solid Tag	JID: 8102-4
Project ID: Project Desc:	YSB7E1 KCS & R on Guinotte sa	mplina	Pro	ject Manager:	Yvonne Smith	
-	Kansas City			State:	: Missouri	
-	Superfund KCS & R ON GUINOTTE	- Site Eva	aluation	/Disposition	Site ID: B7E	1 Site OU: 00
Location Desc:	KCSR-042	C	, - 낙			
		Externa	al Sam _i	ole Number:		
Expected Conc	: (or Circle On	e: Low	Medium	High)	Date	Time(24 hr)
Latitude:		Sam	ple Coli	ection: Start:	12/18/18	12:15
Longitude:	anaministration attributerates			End:	//	·
Laboratory Ar	nalyses:	T-0000000-0				
Container	Preservative	Holding	g Time	Analysis		
1 - 8 oz glass	4 Deg C	180	Days	1 Total Metals A	nalysis of TCLP Me	tals in Soil by ICP-AES
1 - 8 oz glass	4 Deg C	180	Days	1 TCLP Metals in	n Soil	
0 -	4 Deg C	0	Days	1 Percent Solid		

Sample Comments:

(N/A)

Max XRF: 1193 ppn XRF# 1532

KC8K-042 C-4

Sample Collected By: TT

ASR Number: 8	3102 Sample Num	ıber: 5	QC Co	de: Matri	ix: Solid Tag	ID: 8102-5
Project ID: Project Desc:	YSB7E1 KCS & R on Guinotte	sampling	Pro	ject Manager:	Yvonne Smith	
	Kansas City			State:	Missouri	
Program:	Superfund					
Site Name:	KCS & R ON GUINOT	TE - Site Ev	/aluation,	/Disposition	Site ID: B7E1	Site OU: 00
Location Desc:	KCSR-042	C-5				
		Extern	al Samp	ole Number: _		
Expected Conc	(or Circle	One: Low	Medium	High)	Date	Time(24 hr)
Latitude:		Sam	ple Coll	ection: Start:	12/18/18	12:20
Longitude:				End:	_/_/_	:
Laboratory An	alyses:					*
Container	Preservative	Holdir	ng Time	Analysis		
1 - 8 oz glass	4 Deg C	180	Days	1 Total Metals Ar	nalysis of TCLP Meta	als in Soil by ICP-AES
1 - 8 oz glass	4 Deg C	180	Days	1 TCLP Metals in	Soil	
0 -	4 Deg C	0	Days	1 Percent Solid		

Sample Comments:

(N/A)

Max XRF: 1238 ppm XRF# 1532 KUSR-042 C-5

ASR Number:	8102 Sample Numbe	r: 6	QC Co	de: Mati	rix: Solid Tag	ID: 8102-6
Project ID:	YSB7E1 KCS & R on Guinotte sar	mnlina	Pro	ject Manager	: Yvonne Smith	,
	Kansas City			State	: Missouri	
-	Superfund					
Site Name:	KCS & R ON GUINOTTE	- Site Ev	aluation	/Disposition	Site ID: B7E1	Site OU: 00
Location Desc:	KCSR-OHZ	Re	= - 2		Article (Martine Community of C	
		Extern	al Samı	ole Number:		
Expected Conc	(or Circle One	e: Low	Medium	High)	Date	Time(24 hr)
Latitude:		Sam	ple Coll	ection: Start:	12/18/18	<u> </u>
Longitude:				End:		*
Laboratory Ai	nalyses:					•
Container	Preservative	Holdin	ng Time	Analysis		
1 - 8 oz glass	4 Deg C	180	Days	1 Total Metals A	analysis of TCLP Meta	als in Soil by ICP-AES
1 - 8 oz glass	4 Deg C	180	Days	1 TCLP Metals i	n Soil	
0 -	4 Deg C	0	Days	1 Percent Solid		

Sample Comments:

(N/A)

Max XRF: 9+1 ppm XRF# 1532 Kesr-042 RE-2

ASR Number:	8102 Sample Numl	ber: 7	QC Co	de: Matri	ix: Solid Tag	ID: 8102-7
Project ID: Project Desc:	YSB7E1 KCS & R on Guinotte	sampling	Pro	ject Manager:	Yvonne Smith	
	Kansas City	, ,		State:	Missouri	
	Superfund KCS & R ON GUINOTT	E - Site Eva	aluation	/Disposition	Site ID: B7E1	Site OU: 00
Location Desc	: KOSR-042	DZ -2	2			
		Externa	al Samı	ole Number: _	···	Allowand
Expected Cone	c: (or Circle C	ne: Low	Medium	High)	Date	Time(24 hr)
Latitude	·	Samı	ole Coll	ection: Start:	12/18/18	12:30
Longitude	- ADMINISTRA PROPERTIES STREET			End:	_/_/_	_:_
Laboratory A	nalyses:					
Container	Preservative	Holding	J Time	Analysis		
1 - 8 oz glass	4 Deg C	180	Days	1 Total Metals Ar	nalysis of TCLP Met	als in Soil by ICP-AES
1 - 8 oz glass	4 Deg C	180	Days	1 TCLP Metals in	Soil	
0 -	4 Deg C	0	Days	1 Percent Solid		

Sample Comments:

(N/A)

Max XRF: 363

XRF# 1532

KCSR-042 DZ-2

Sample Collected By: □□

ASR Number: 8	Sample Number:	8	QC Cod	e: Matr	ix: Solid	Tag ID: 8102-8			
Project ID: Project Desc:		SB7E1 Project Manager: Yvonne Smith CS & R on Guinotte sampling							
	Kansas City	F9		State:	Missouri				
Program:	•				•				
Site Name:	KCS & R ON GUINOTTE -	Site Eva	luation/	Disposition	Site ID: E	37E1 Site OU: 00			
Location Desc:	KCS4-042	C-3	.						
		Externa	l Samp	le Number: _		-			
Expected Conc	(or Circle One:	Low N	1edium	High)	Date	Time(24 hr)			
Latitude:		Samp	le Colle	ection: Start:	12/18/18	<u>12 : 35</u>			
Longitude:				End:	_/_/_	;			
Laboratory An	alyses:	******		······································					
Container	Preservative	Holding	Time	Analysis					
1 - 8 oz glass	4 Deg C	180	Days	1 Total Metals Ar	nalysis of TCLP	Metals in Soil by ICP-AES			
1 - 8 oz glass	4 Deg C	180	Days	1 TCLP Metals in	Soil				
0 -	4 Deg C	0	Days	1 Percent Solid					

Sample Comments:

(N/A)

Max XRF: 493 ppm

KRF: 1532 KCSR-042 C-3

Sample Collected By: □

ASR Number:	8102 Sample Number:	9	QC Cod	ie: Mat	rix: Solid Tag	ID: 8102-9		
Project ID: Project Desc:	YSB7E1 KCS & R on Guinotte sam	plina	Project Manager: Yvonne Smith					
₩	• • •				: Missouri			
Program: Site Name:	Superfund KCS & R ON GUINOTTE -	Site Eva	aluation,	/Disposition	Site ID: B7E1	Site OU: 00		
Location Desc:	KCSR-042 C	-2						
		Externa	al Samp	le Number:		MATERIAL PROPERTY OF THE PROPE		
Expected Conc	(or Circle One:	Low I	Medium	High)	Date	Time(24 hr)		
Latitude:		Sam	ole Coll	ection: Start:	12/18/18	12:40		
Longitude:				End:		***************************************		
Laboratory An	alyses:	······································			***************************************			
Container	Preservative	Holding) Time	Analysis				
1 - 8 oz glass	4 Deg C	180	Days	1 Total Metals A	Analysis of TCLP Meta	ils in Soil by ICP-AES		
1 - 8 oz glass	4 Deg C	180	Days	1 TCLP Metals i	n Soil			
0 -	4 Deg C	0	Days	1 Percent Solid		·		

Sample Comments:

(N/A)

Max LRF: 1600 ppm LRF# 1532

KCSR-042 C-2

Sample Collected By: **Ⅲ**

APPENDIX G EPA REGION 7 LABORATORY DATA

United States Environmental Protection Agency Region 7 300 Minnesota Avenue Kansas City, KS 66101

Date: 10/06/2017

Subject: Transmittal of Sample Analysis Results for ASR #: 7556

Project ID: JDB7E1

Project Description: KCS & R on Guinotte sampling

From: Margaret E.W. St. Germain, Chief

Laboratory Technology & Analysis Branch, Environmental Sciences & Technology Division

To: Joe Davis

SUPR/AERR/RRNS

Enclosed are the analytical data for the above-referenced Analytical Services Request (ASR) and Project. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. Please complete the Online ASR Sample/Data Disposition and Customer Survey for this ASR as soon as possible. The process of disposing of the samples for this ASR will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Online ASR Sample/Data Disposition and Customer Survey.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295.

Enclosures

cc: Analytical Data File.

Summary of Project Information

Project Manager: Joe Davis **Org:** SUPR/AERR/R **Phone:** 913-551-7909

Project ID: JDB7E1

Project Desc: KCS & R on Guinotte sampling

ASR Number: 7556

Location: Kansas City **State:** Missouri **Program:** Superfund

Site Name: KCS & R ON GUINOTTE - Site Evaluation/Disposition Site ID: B7E1 Site OU: 00

Purpose: Site Cleanup Support GPRA PRC: 303DC6

Residential lead soil sampling and documentation to support a Removal Assessment.

Submitted ASR from EPA PM/Sampler noted that this site is not subject to a litigation hold at this time.

Explanation of Codes, Units and Qualifiers used on this report

Sample QC Codes: QC Codes identify the type of sample for quality control purpose. **Units:** Specific units in which results are reported.

= Field Sample % = Percent

mg/kg = Milligrams per Kilogram

Data Qualifiers: Specific codes used in conjunction with data values to provide additional information on the quality of reported results, or used to explain the absence of a specific value.

(Blank) = Values have been reviewed and found acceptable for use.

U = The analyte was not detected at or above the reporting limit.

J = The identification of the analyte is acceptable; the reported value is an estimate.

UJ = The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.

ASR Number: 7556

Sample Information Summary

10/06/2017

Project ID: JDB7E1

Project Desc: KCS & R on Guinotte sampling

Sample No	QC Code	Matrix	Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
1 -		Solid	KCSR-001, C3 (Guinotte Avenue)		08/01/2017	13:30			09/07/2017
2 -		Solid	KCSR-010, C1 (Guinotte Avenue)		08/02/2017	09:15			09/07/2017
3 -		Solid	KCSR-012, C1 (Vacant lot - NE corner of Wabash Ave & the alley)		08/02/2017	10:30			09/07/2017
4 -		Solid	KCSR-013, C1 (Mobile Home Park - NE corner of Wabash Ave & Guinotte Ave)		08/02/2017	10:37			09/07/2017
5 -		Solid	KCSR-016, C1 (Berkley Park)		08/02/2017	13:00			09/07/2017

10/06/2017

Project ID: JDB7E1 Project Desc KCS & R on Guinotte sampling

Analysis Comments About Results For This Analysis

1 Percent Solid

ASR Number: 7556

Lab: Region 7 ESAT Contract Lab (In-House) **Method:** EPA Region 7 RLAB Method 3142.9H

Basis: N/A

Samples: 1- 2- 3- 4- 5-

Comments:

(N/A)

1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES

Lab: Region 7 ESAT Contract Lab (In-House) **Method:** EPA Region 7 RLAB Method 3122.3F

Basis: Dry

Samples: 1- 2- 3- 4- 5-

Comments:

Cadmium (72,69,75-105) was J-coded in sample 1. Although the analyte in question has been positively identified in the sample, the quantitation is an estimate (J-coded) due to low recovery of this analyte in the laboratory matrix spike. The actual concentration for this analyte may be higher than the reported value.

Selenium (52,54,75-108) was UJ-coded in sample 1. This analyte was not found in the sample at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to low recovery of this analyte in the laboratory matrix spike. The actual reporting limit for this analyte may be higher than the reported value.

ASR Number: 7556 RLAB Approved Sample Analysis Results 10/06/2017

Analysis/ Analyte	Units	1	2	3	4
1 Percent Solid Solids, percent	%	97.1	97.4	96.4	96.8
1 Total Metals Analysis of TCLP Metals in Soil	by ICP-AES				
Arsenic	mg/kg	11.0	9.2	11.3	6.3
Barium	mg/kg	320	174	236	150
Cadmium	mg/kg	13.4 J	5.8	12.3	5.9
Chromium	mg/kg	14.1	11.6	16.2	14.8
Lead	mg/kg	342	274	414	162
Selenium	mg/kg	10.4 UJ	10.2 U	10.4 U	10.5 U
Silver	mg/kg	2.1 U	2.0 U	2.1 U	2.1 U

RLAB Approved Sample Analysis Results 10/06/2017

ASR Number: 7556

Analysis/ Analyte	Units	5
1 Percent Solid Solids, percent	%	96.6
1 Total Metals Analysis of TCLP Metals in	n Soil by ICP-AES	
Arsenic	mg/kg	5.8
Barium	mg/kg	98.5
Cadmium	mg/kg	5.3
Chromium	mg/kg	15.2
Lead	mg/kg	149
Selenium	mg/kg	10.4 U
Silver	mg/kg	2.1 U

United States Environmental Protection Agency Region 7 300 Minnesota Avenue Kansas City, KS 66101

Date: 12/06/2018

Subject: Transmittal of Sample Analysis Results for ASR #: 8079

Project ID: JDB7E1

Project Description: KCS & R on Guinotte sampling

From: Margaret E.W. St. Germain, Chief

Laboratory Technology & Analysis Branch Environmental Sciences & Technology Division

To: Joe Davis

SUPR/AERR/RRNS

Enclosed are the analytical data for the above-referenced Analytical Services Request (ASR) and Project. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please ensure that you file this electronic (.pdf only) transmittal in your records management system. The Regional Laboratory will now retain all of the original hardcopy documentation (e.g. COC[s] and the R7LIMS field sheet[s], etc.) according to our ENST records management system.

Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. Please complete the Online ASR Sample/Data Disposition and Customer Survey for this ASR as soon as possible. The process of disposing of the samples for this ASR will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Online ASR Sample/Data Disposition and Customer Survey. It is critical that we receive your response in accordance to RCRA and the laboratory accreditation.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295.

Enclosures

Summary of Project Information

12/06/2018

Project Manager: Joe Davis **Org:** SUPR/AERR/R **Phone:** 913-551-7909

Project ID: JDB7E1

Project Desc: KCS & R on Guinotte sampling

ASR Number: 8079

Location: Kansas City **State:** Missouri **Program:** Superfund

Site Name: KCS & R ON GUINOTTE - Site Evaluation/Disposition Site ID: B7E1 Site OU: 00

Purpose: Site Cleanup Support GPRA PRC: 000DC6

Residential lead soil sampling and documentation to support a Removal Assessment.

Submitted ASR from EPA PM/Sampler (LH) noted that this site is not subject to a

litigation hold at this time.

GPRA/site code (+OU) check OK per JN on 11/1/2018.

Explanation of Codes, Units and Qualifiers used on this report

Sample QC Codes: QC Codes identify the type of sample for quality control purpose. **Units:** Specific units in which results are reported.

__ = Field Sample

mg/kg = Milligrams per Kilogram

Data Qualifiers: Specific codes used in conjunction with data values to provide additional information on the quality of reported results, or used to explain the absence of a specific value.

(Blank)= Values have been reviewed and found acceptable for use.

U = The analyte was not detected at or above the reporting limit.

UJ = The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.

ASR Number: 8079

Sample Information Summary

12/06/2018

Project ID: JDB7E1

Project Desc: KCS & R on Guinotte sampling

Sample No		Matrix	Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
1 -	_	Solid	KCSR-018, N Garland Avenue (C-2)		09/11/2018	09:23			11/02/2018
2 -		Solid	KCSR-020, N Prospect Avenue (C-1)		09/11/2018	10:11			11/02/2018
3 -		Solid	KCSR-023, N. Prospect Avenue (C-3)		09/11/2018	11:15			11/02/2018
4 -		Solid	KCSR-025, N. Montgall Avenue (C-1)		09/11/2018	12:10			11/02/2018
5 -	_	Solid	KCSR-027, N. Montgall Avenue (C-3)		09/11/2018	12:50			11/02/2018
6 -	9.1	Solid	KCSR-030, Guinotte Avenue (C-1)		09/12/2018	09:10			11/02/2018
7 -		Solid	KCSR-032, N. Garland Avenue (C-3)		09/12/2018	10:00			11/02/2018
8 -		Solid	KCSR-033, N. Garland Avenue (C-2)		09/12/2018	10:30			11/02/2018
9 -		Solid	KCSR-034, N. Garland Avenue (PA-1)		09/12/2018	10:48			11/02/2018
10 -			KCSR-035, N. Washburn (C-1)		09/12/2018	11:00			11/02/2018
11 -		Solid	KCSR-037, N. Montgall Avenue (C-2)		09/12/2018	13:15			11/02/2018
12 -		Solid	KCSR-038, Rochester Avenue (C-2)		09/12/2018	13:30			11/02/2018

Analysis Comments About Results For This Analysis

1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES

Lab: Contract Lab Program (Out-Source)

Method: CLP Statement of Work

Basis: Dry

ASR Number: 8079

 Samples:
 1-___
 2-___
 3-___
 4-___
 5-___
 6-___
 7-__

 8-__
 9-__
 10-__
 11-__
 12-__

Comments:

Selenium in samples -1 through -12 was UJ-coded. This analyte were not found in the samples at or above the reporting limits, however, the reporting limits are an estimate (UJ-coded) due to negative recoveries of these analytes in the interference check samples (ICS) which were not present in the ICS solution but whose absolute values were greater than the method detection limits (MDL), therefore, a possibility of false negatives exists. The actual reporting limits may be higher than the reported values.

12/06/2018

ASR Number: 8079 RLAB Approved Sample Analysis Results 12/06/2018

Analysis/ Analyte	Units	1	2	3	4
1 Total Metals Analysis of TCLP Metals in	n Soil by ICP-AES				
Arsenic	mg/kg	9.0	17.8	8.3	10.6
Barium	mg/kg	207	273	245	241
Cadmium	mg/kg	5.4	7.3	5.6	5.3
Chromium	mg/kg	18.5	31.5	17.7	19.7
Lead	mg/kg	234	496	200	691
Selenium	mg/kg	3.6 UJ	3.5 UJ	3.5 UJ	3.4 UJ
Silver	mg/kg	1.0 U	0.99 U	1.0	0.97 U

ASR Number: 8079 RLAB Approved Sample Analysis Results 12/06/2018

Analysis/ Analyte	Units	5	6	7	8
1 Total Metals Analysis of TCLP Metals	in Soil by ICP-AES				
Arsenic	mg/kg	18.6	6.4	7.4	11.9
Barium	mg/kg	378	179	228	429
Cadmium	mg/kg	14.5	4.5	4.2	9.3
Chromium	mg/kg	24.1	21.4	31.1	32.8
Lead	mg/kg	708	208	181	564
Selenium	mg/kg	3.5 UJ	3.7 UJ	3.5 UJ	3.2 UJ
Silver	mg/kg	1.0	1.0 U	1.0 U	0.92 U

ASR Number: 8079 RLAB Approved Sample Analysis Results 12/06/2018

Analysis/ Analyte	Units	9	10	11	12
1 Total Metals Analysis of TCLP Metals in So	•				
Arsenic	mg/kg	12.4	31.7	12.5	12.1
Barium	mg/kg	389	222	291	341
Cadmium	mg/kg	9.3	5.1	10.5	26.3
Chromium	mg/kg	26.4	24.2	27.2	22.8
Lead	mg/kg	451	229	344	382
Selenium	mg/kg	3.5 UJ	3.4 UJ	3.4 UJ	3.4 UJ
Silver	mg/kg	1.0 U	0.98 U	0.98 U	0.97 U

United States Environmental Protection Agency Region 7 300 Minnesota Avenue Kansas City, KS 66101

Date: 01/31/2019

Subject: Transmittal of Sample Analysis Results for ASR #: 8102

Project ID: YSB7E1

Project Description: KCS & R on Guinotte sampling

From: Margaret E.W. St. Germain, Chief

Laboratory Technology & Analysis Branch Environmental Sciences & Technology Division

To: Yvonne Smith SUPR/AERR

Enclosed are the analytical data for the above-referenced Analytical Services Request (ASR) and Project. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please ensure that you file this electronic (.pdf only) transmittal in your records management system. The Regional Laboratory will now retain all of the original hardcopy documentation (e.g. COC[s] and the R7LIMS field sheet[s], etc.) according to our ENST records management system.

Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. Please complete the Online ASR Sample/Data Disposition and Customer Survey for this ASR as soon as possible. The process of disposing of the samples for this ASR will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Online ASR Sample/Data Disposition and Customer Survey. It is critical that we receive your response in accordance to RCRA and the laboratory accreditation.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295.

Enclosures

Summary of Project Information

01/31/2019

Project Manager: Yvonne Smith **Org:** SUPR/AERR **Phone:** 913-551-7795

Project ID: YSB7E1

ASR Number: 8102

Project Desc: KCS & R on Guinotte sampling

Location: Kansas City **State:** Missouri **Program:** Superfund

Site Name: KCS & R ON GUINOTTE - Site Evaluation/Disposition Site ID: B7E1 Site OU: 00

Purpose: Site Cleanup Support GPRA PRC: 000DC6

Residential lead soil sampling and documentation to support a Removal Assessment.

Submitted ASR from EPA PM/Sampler (LH) dated 11/19/18 noted that this site is not

subject to a litigation hold at this time.

GPRA/site code (+OU) check OK per JN on 11/27/18.

Explanation of Codes, Units and Qualifiers used on this report

Sample QC Codes: QC Codes identify the type of sample for quality control purpose. **Units:** Specific units in which results are reported.

__ = Field Sample mg/L = Milligrams per Liter

mg/kg = Milligrams per Kilogram

% = Percent

Data Qualifiers: Specific codes used in conjunction with data values to provide additional information on the quality of reported results, or used to explain the absence of a specific value.

(Blank)= Values have been reviewed and found acceptable for use.

U = The analyte was not detected at or above the reporting limit.

ASR Number: 8102

Sample Information Summary

01/31/2019

Project ID: YSB7E1

Project Desc: KCS & R on Guinotte sampling

Sample QC No Code	Matrix	Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
1	Solid	KCSR-042, C-1		12/18/2018	12:00			12/19/2018
2	Solid	KCSR-042, DZ-1		12/18/2018	12:05			12/19/2018
3	Solid	KCSR-042, RE-1		12/18/2018	12:00			12/19/2018
4	Solid	KCSR-042, C-4		12/18/2018	12:15			12/19/2018
5	Solid	KCSR-042, C-5		12/18/2018	12:20			12/19/2018
6	Solid	KCSR-042, RE-2		12/18/2018	12:25			12/19/2018
7	Solid	KCSR-042, DZ-2		12/18/2018	12:30			12/19/2018
8	Solid	KCSR-042, C-3		12/18/2018	12:35			12/19/2018
9	Solid	KCSR-042, C-2		12/18/2018	12:40			12/19/2018

ASR Number: 8102

RLAB Approved Analysis Comments

01/31/2019

Project ID: YSB7E1

Project Desc KCS & R on Guinotte sampling

Analysis	Comments	About Results	For This	Analysis
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Percent Solid 1

> **Lab:** Region 7 ESAT Contract Lab (In-House) Method: EPA Region 7 RLAB Method 3142.9H

Basis: N/A

Samples: 1-__ 2-_ 3-_ 4-_ 5-_ 6-_ 7-_ 8-_ 9-_

Comments:

TCLP Metals in Soil

Lab: Region 7 ESAT Contract Lab (In-House)

Method: EPA Region 7 RLAB Method 3122.3G TCLP

Basis: N/A

Samples: 1-__ 2-_ 3-_ 4-_ 5-_ 6-_ 7-_

Comments:

Total Metals Analysis of TCLP Metals in Soil by ICP-AES

Lab: Region 7 ESAT Contract Lab (In-House) Method: EPA Region 7 RLAB Method 3122.3G

Basis: Dry

Samples: 1-__ 2-__ 3-__ 4-__ 5-__ 6-__ 7-__ 8-__ 9-__

Comments:

ASR Number: 8102 RLAB Approved Sample Analysis Results 01/31/2019

Analysis/ Analyte	Units	1	2	3	4
1 Percent Solid Solids, percent	%	94.3	95.3	97.8	97.5
1 TCLP Metals in Soil Lead	mg/L	4.62	5.08	0.154	0.298
1 Total Metals Analysis of TCLP Metals in	Soil by ICP-AES				
Arsenic	mg/kg	30.2	23.9	8.7	6.4
Barium	mg/kg	457	363	108	74.0
Cadmium	mg/kg	2.3	2.2	1.0 U	1.0 U
Chromium	mg/kg	17.9	16.5	13.6	12.0
Lead	mg/kg	4230	3030	393	924
Selenium	mg/kg	10.3 U	10.1 U	9.6 U	10.0 U
Silver	mg/kg	2.1 U	2.0 U	1.9 U	2.0 U

ASR Number: 8102 RLAB Approved Sample Analysis Results 01/31/2019

Analysis/ Analyte	Units	5	6	7	8
1 Percent Solid Solids, percent	%	97.1	96.5	93.7	90.8
1 TCLP Metals in Soil Lead	mg/L	0.665	0.313	0.526	0.050 U
1 Total Metals Analysis of TCLP Metals in So	oil by ICP-AES				
Arsenic	mg/kg	19.9	6.6	5.9	33.5
Barium	mg/kg	128	127	87.0	130
Cadmium	mg/kg	1.6	1.0 U	1.0 U	12.2
Chromium	mg/kg	11.4	15.3	8.4	22.6
Lead	mg/kg	1130	981	823	464
Selenium	mg/kg	10.2 U	10.0 U	10.2 U	10.9 U
Silver	mg/kg	2.0 U	2.0 U	2.0 U	2.2 U

RLAB Approved Sample Analysis Results 01/31/2019

ASR Number: 8102

Analysis/ Analyte	Units	9
1 Percent Solid Solids, percent	%	90.7
1 TCLP Metals in Soil		
Lead	mg/L	0.308
1 Total Metals Analysis of TCLP Metals in Soil by ICP-AES		
Arsenic	mg/kg	95.2
Barium	mg/kg	209
Cadmium	mg/kg	6.3
Chromium	mg/kg	12.7
Lead	mg/kg	2290
Selenium	mg/kg	10.7 U
Silver	mg/kg	5.6